DOCUMENT RESUME

ED 075 002 24 HE 004 082

AUTHOR Olivier, Maurice E.; Barnes, Everett W., Jr.
TITLE Planning for Educational Decision-Making in the 70's. University of New Hampshire Summer Research Training Institute. Final Report and Supplementary Appendix D.
INSTITUTION New Hampshire Univ., Durham. Bureau of Educational Research and Testing Services.
SPONS AGENCY National Center for Educational Research and Development (DHEW/OE), Washington, D.C. Division of Higher Education Research.
BUREAU NO BR-0-0579
PUB DATE Jul 71
GRANT OEG-0-7-70-4474
NOTE 511p.

EDRS PRICE MF-$0.65 HC-$19.74
DESCRIPTORS *Educational Research; Educational Researchers; *Higher Education; Institutes (Training Programs); *Research Methodology; *Research Skills; Summer Institutes

ABSTRACT

In the summers of 1967 through 1970, summer institutes were held at the University of New Hampshire, Durham to train those involved in the field of higher education with various research methods. Although the initial institute participants consisted mainly of classroom personnel from New Hampshire, the participants in the three subsequent programs included educational administrators, area specialists and project directors who were actively involved in a variety of Federal, regional, state and local educational organization efforts. This document focuses on two major evaluative targets: (1) an evaluation of the 1970 summer institute efforts, and (2) a longitudinal-based assessment of the instructional effectiveness of the 1967-70 institute programs separately and in the aggregate. The results of these assessments include not only substantive data, but also their associated recommendations. (Author/HS)

FILMED FROM BEST AVAILABLE COPY

ED 075002

BR 0-0579
PA 24

FINAL REPORT

University of New Hampshire
Summer Research Training Institute

July 6 - August 14, 1970

Planning for Educational Decision-Making in the 70's

Contract Number -- OEG-0-7-70-4474

HE 004 082

ED 075002

USOE - HEW 1970 Research & Evaluation Training Institute

"Planning for Educational Decision-Making in the '70's"

University of New Hampshire
College of Liberal Arts
Department of Education
Bureau of Educational Research and Testing Services

SUPPLEMENTARY APPENDIX D

to

FINAL REPORT

REPORT RECEIVED
AND APPROVED

Chief, Research Training Branch

Instructional and Evaluative Materials

HE 004 082

TABLE OF CONTENTS

Introduction to Supplementary Appendix

Bibliography by Instructional Segment

HEW Institute Brochure

Form Letters

General Information Handbook

Selected Instructional Materials in Sequence of Presentation:

- Presentation Outline for Project Management Component
- References and Bibliography on Educational Project Management
- A Simulation Exercise in Program/Project Management
- Abstract - Learning Hierarchies - Numerical Considerations
- General Classification of Research Types
- Sources of Educational Literature
- Personalized Education in Southride School
- Analytical Diagnosis in Arithmetic - "There's No Easy Way to Diagnose Instruction"

Evaluative Instruments (Internal & External)

- Gene Glass - Pre-Post Test for "Planning for Educational Decision-Making in the '70's"
- Criterion-Referenced Examination for Program/Project Management Component
- Project Management Reaction Scale
- Van Pit Series - Thinking For Grades 4, 5 & 6
- Mass-Critical Thinking Test
- Self-Report of Knowledge Inventory (Stufflebeam)
- CIRCE Attitude Scale #1.4 - Attitudes Toward Educational Evaluation
- CIRCE Institute Participant Opinionnaire (weekly)
- CIRCE Summary Opinionnaire
- CIRCE Participant Observer's Daily Log
- CIRCE Institute Staff Site-Visit Interview Form
- BERTS HEW Research Institute Self-Assessment Profile

BERTS Participant Follow-Up Evaluation Questionnaire

Statistical Tables from BERTS Follow-Up Questionnaire

Williamson On-Site Follow-Up Evaluation Rationale

Williamson On-Site Follow-Up Interview Questions

Tabulated Results of Williamson Follow-Up

Curwood Report on Institute Pre-Orientation

Curwood Pre-Orientation Questionnaire

INTRODUCTION TO SUPPLEMENTARY APPENDIX

In order to keep the original report in a format that is easily manageable an appendix of all instructional and evaluative materials was deleted from the original report appendix. However, the authors of this document feel that it is important for parties interested in viewing the instructional and evaluative materials to have these resources available. Therefore, a supplementary appendix to the original report was prepared. Six of these copies are available, five at the National Center for Research and Development, Office of Education, Washington, D.C., and one at The Bureau of Educational Research and Testing Services. University of New Hampshire, Durham, New Hampshire.

In the case of bulky or hardbound materials such as books, that we omitted from the appendix, arrangements can be made to obtain them from the publisher or in some cases, they can be obtained upon request from the Bureau of Educational Research and Testing Services, Box Q, Durham, New Hampshire.

Maurice Olivier
Everett Barnes

Bibliography

Pre-Test and Post-Test, Glass, Gene

Program Management
Week I - Dr. Desmond Cook

Presentation Outline for Project Management Component, Educational Program Management Center, Educational Development Faculty, College of Education, The Ohio State University, Columbus Ohio

Criterion-Referenced Examination for Program/Project Management Component, Educational Program Management Center, Educational Development Faculty, College of Education, The Ohio State University, Columbus, Ohio

References and Bibliography on Educational Project Management, Cook, Desmond; College of Education, The Ohio State University, Columbus, Ohio, Sept. 1969.

Project Management Reaction Scale, Educational Program Management Center, Educational Development Faculty, College of Education, The Ohio State University, Columbus, Ohio

The Nature of Project Management, Cook, Desmond L.; Educational Program Management Center, College of Education, The Ohio State University Columbus, Ohio, June 1968.

A Generalized Project Management System Model, Cook, Desmond L.; Educational Program Management Center, College of Education, The Ohio State University, Columbus, Ohio, November 1968.

Use of Systems Analysis and Management Systems in Project Planning and Evaluation, Cook, Desmond L.; Socio-Econ. Plan. Sci. Vol. 2, pp.389-397, Pergamon Press, Great Britain, 1969.

Program Evaluation and Review Technique, Cook, Desmond L., College of Education, The Ohio State University, Columbus, Ohio,

Project Management and Educational Change, Blanchard, Gary F.; and Cook, Desmond L.; presented to the American Educational Research Association, Minneapolis, Minnesota, March 5, 1970.

A Simulation Exercise in Program/Project Management, Educational Program Management Center, Educational Development Faculty, College of Education, The Ohio State University, Columbus, Ohio, April 1970.

Behavioral Objectives and Learning Hierarchies
Week 2&3 - Dr. Henry Walbesser

Critical Thinking Test, Maw, Ethel Wildey;

Van Pit Series - Thinking, the Modern Education Service, Box 26, Bronxville, New York

Learning Hierarchies--Numerical Considerations, Eisenberg, Theodore A.; The Ohio State University, Columbus, Ohio

Constructing Behavioral Objectives, Walbesser, Henry W., The Bureau of Educational Research and Field Services, University of Maryland, College Park, Maryland, 1970.

A Hierarchically Based Test Battery for Assessing Scientific Inquiry, Walbesser, Henry H., American Association for the Advancement of Science

Evaluations of Science - A Process Approach, from "An Evaluation Model and Its Application, Second Report, A.A.A.S. 1968.

Evaluation Strategies
Week 4&5 - Dr. Daniel Stufflebeam

Discrepancy Evaluation Model 1969, An Approach to Local Program Improvement and Development, Pittsburgh Public Schools, Pittsburgh, Penn., 1969.

Educational Evaluation and Decision-Making, PDK Commission on Evaluation, Phi Delta Kappa International and the Ohio State University Evaluation Center, December 1970.

Experimental and Quasi-Experimental Designs for Research, Campbell, Donald T., Northwestern University; and Stanley, Julian C., Johns Hopkins University; Rand McNally & Company, Chicago, 1968.

Context, Input, Process and Product Model, Stufflebeam, Daniel L., Evaluation Center, Ohio State University, Columbus, Ohio

Development, Diffusion and Adoption
Week 6 - Dr. William Asher

General Classification of Research Types, Asher, William J.; Purdue University, Lafayette, Indiana

Personalized Education in Southside School, Spaulding, Robert L.; Durham Education Improvement Program, Duke University, Durham, North Carolina

Analytical Diagnosis in Arithmetic, There's No Easy Way to Diagnose Instruction, Author Unknown

Development, Dissemination, and Adoption: The Need for an Elimination Function,: Asher, William, Purdue Educational Research Center, Purdue University, Lafayette, Indiana

Institute Participant Opinionnaire, Center for Instructional Research and Curriculum Evaluation, University of Illinois, Urbana, Illinois

FILMED FROM BEST AVAILABLE COPY

HEW INSTITUTE

U.S. Office of Education, Title IV

Planning for Educational Decision Making in the 70's

(a national doctoral and post-doctoral program)

Project Management Techniques; Behavioral Objectives and Assessment; Educational Evaluation Models; Problematic Simulation; and Development, Dissemination, and Adoption of Educational Innovation

Bureau of Educational Research and Testing Services
Durham, New Hampshire

July 6 through August 14, 1970

Dr. Daniel Stufflebeam, in a program mission statement developed for Ohio State University, makes the following statements:

> "The tasks of educational development include efforts to understand the dynamics of educational change, to identify targets and criteria for improvement of educational systems, and to formulate, test, and integrate into the normal operation of systems improved programs or ways of operating which produce higher levels of systems performance . . . Increasingly, however, educational institutions are seeking highly qualified professionals in development specialties; persons with broad understanding of the operations of the education system with the ability to understand global problems of large systems, such as local school districts and state or national educational systems; and with the capacity to organize and operate staff activities in evaluation, planning, program management or research and development. These are newly emerging roles, not yet clearly or consistently defined, which represent efforts by educational systems to institutionalize mechanisms for orderly systems development."

It is to the training of these kinds of people that this Institute directly addresses itself.

THE INSTITUTE

The summer Institute, **Planning for Educational Decision-making in the 70's,** sponsored by the United States Department of Health, Education and Welfare will be held at the University of New Hampshire for a six week period, from July 6 to August 14, 1970.

Thirty-two participants comprised of doctoral and post-doctoral candidates from throughout the United States and its territories will participate in an intensive, comprehensive program of study and training in the methodology and application of educational research.

The Institute will concern itself with the problems of training educators at the doctoral and post-doctoral level in the skills of project management, educational research, and evaluation—as aids in the process of educational decision-making.

The major themes of the Institute are:

1. The study of the problems inherent in the management of an educational evaluation project.
2. The study of the problems inherent in evaluating the particular curriculum changes with which the trainee is concerned.
3. The study of the major alternatives open to the educator in terms of educational research methodologies.
4. The study of the problems associated with the development, dissemination, and adoption process in the area of educational evaluation.
5. The study of communications techniques applicable to proper implementation of the decision-making process at various levels of the educational system.
6. The use of modern data processing equipment to facilitate the encoding and utilization of research data.
7. The reading of current educational literature relevant to the research project with which the trainee is involved.

Program and Consultants

Participating in the Institute will be the following personnel: Director: **Albert Elwell,** Bureau of Educational Research and Testing Services, University of New Hampshire.

Consultants: **Desmond Cook,** Educational Program Management Center, Ohio State University, and **Gregory Trezebratowski,** Ohio State University, who will lead the sessions concerned with project management.

Henry Walbesser, University of Maryland, who will direct the study of the construction of behavioral objectives and the design of assessment tasks, the construction of learning sequences, and a study of their empirical foundations.

The third section of the Institute will focus on the construction of behavioral objectives. It will be instructed by Dr. Walbesser with the assistance of **Leonard Cahen,** Educational Testing Service, Princeton, New Jersey; and **William Gray,** of the Maryland State Department of Education.

The study of different models to evaluate education will be directed by **Daniel Stufflebeam,** Evaluation Center, Ohio State University; and **Egon Guba,** Associate Dean, School of Education, Indiana University.

Dr. Stufflebeam will conduct a series of seminars concerned with problematic simulation, with the assistance of **Robert Hammond,** Ohio State University, and Dr. Guba.

The final sessions of the Institute will be devoted to an intensive discussion of the problems associated with the actual development, dissemination, and adoption of educational innovations, directed by **William Asher,** Purdue University, and **Daniel Heisey,** Whittemore School of Business and Economics, University of New Hampshire.

Sarah Curwood, Chairman of the Department of Sociology at Knoxville College will act as a special consultant to Southern black educators in an introductory week of seminars.

HEW Institute

Planning for Educational Decision Making in the 70's

Application Form

(detach and mail before June 1, 1970)

name _____

address _____

_____

zip code _____

home phone _____

age _____ u.s. citizen? _____

number of dependents (excluding yourself) who were claimed on your last federal income tax return (you may not claim any dependents if you filed a joint return and were not the major wage earner) _____

_____

are you presently employed in a school, system, or college and/or employed by title I or title III?

yes _____ no _____

(if not presently employed in a school, system, or college and/or employed by title I or title III, omit the items on this page, go on to next)

school name _____

address _____

_____

zip code _____

school phone _____

type of school (technical institute, elementary, junior high, etc.) _____

number of students enrolled _____

name of supervisor _____

your position _____

if you are preparing for a different assignment, specify here _____

_____

summarize your years of teaching experience and related work:

subjects or assignments	level	years

list your places of employment in teaching or related work in the past five years:

place	address

what colleges or universities have you attended (most recent first):

date	institution	degree	major

list all undergraduate and graduate courses in evaluation and measurement:

_____ _____

_____ _____

_____ _____

what teaching certificates or other credentials do you hold? _____

_____

describe any other significant academic experiences you have had in the subject field of this summer institute _____

_____

list the professional organizations in which you hold membership _____

_____

are you applying for any institutes or fellowships in addition to this one? _____

if yes, specify _____

I certify that the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

date _____ signature _____

Academic Credits

Six hours of graduate credit will be awarded for the successful completion of the Institute. The participants may apply these credits at the doctoral or post doctoral level—Credits will be awarded according to the following prospectus:

Education 881, (4 credits), **Methods and Techniques of Educational Research.** This course is a critical study of the principal methods employed in the investigation of educational problems and an evaluation of the procedures and standards used in reporting the findings; designed as an advanced course for candidates for graduate degrees.

Education 895, (2 credits), **Research Problems in Education** is concerned with the individual investigation of a problem in the area of educational research. This course will be used first to expose the trainees to a variety of educational research efforts. In the latter portion, each trainee will be expected to develop a research proposal which will have practical importance and relevance to his home district, or to evaluate a project presently being studied.

Stipends and Fees

Tuition and fees for participating members of the Institute are provided for under the accords of the HEW grant for the summer program.

Following acceptance, participants may receive a stipend of $75.00 per week plus $15 per week for each dependent for the period of attendance at the Institute. Stipends will be paid bi-weekly, on July 17, 31, and August 14. A maximum of 2.5 dependents will be guaranteed payment throughout the six weeks of the Institute. Additional dependency payment will be determined by the amount of funding available.

Participants will also receive travel expense payments for one round trip between their home and the University of New Hampshire. Textbooks and supplies normally associated with graduate programs will be purchased by the enrollee.

Since the success of the Institute will depend on the sharing of ideas, participants will be housed in one University residence hall and will have their meals in a reserved area of the dining hall. Participants will be requested to avail themselves of these facilities Mondays through Fridays, and will be responsible for their costs. The total charges for the six week period are as follows:

Single room and 15 meals/week	$228.00
20 meals/week	264.00
Double room and 15 meals/week	210.00
20 meals/week	246.00

A private Institute reading room will be made available in the residence hall.

Criteria for Admission

Institute applicants must be presently working in an approved Doctorate program in the area of Education and/or hold an earned Doctorate in the area of Education.

The applicant must also meet one or more of the following criteria:

1. He must be one of the personnel in any State Department of Education in the United States, having responsibility for school-related projects, or

2. A curriculum coordinator, such as an Assistant Superintendent of Schools, who has been designated a project director;
3. A member of Senior High, Junior High, or Elementary School staff responsible for implementing curriculum study;
4. A member of a college or university faculty or staff, serving as a research consultant to any public school system;
5. A staff member of a public or private school interested in developing research competencies;
6. An employee of an educational research laboratory or a research and development center.

Academic Criteria: The applicant must possess a Bachelor's degree from an accredited institution, evidence of satisfactory scholarship, and promise of ability to succeed at the graduate level. An undergraduate grade point average of 2.5 (on a 4.0 scale) will be minimum.

Teaching Experience: A minimum of two years in public or private school education and evidence of ability to provide leadership and responsibility in the area of curriculum research will be required. A letter of recommendation will be requested from the applicant's immediate superior indicating the meeting of these criteria.

The Institute will operate in compliance with the Civil Rights Act of 1964, which states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefit of, or be subject to discrimination under any program or activity receiving Federal financial assistance."

Application Procedures

Applicants to the Institute who fit the above-mentioned criteria will be selected for admission by a Selection Committee, comprised of individuals directly concerned with teacher preparation and research in education at the University of New Hampshire.

Applicants for admission to the Institute must return the enclosed Application Form to the Bureau of Educational Research and Testing Services no later than June 1, 1970. The Confidential Evaluation Form,

to be completed by the applicant's immediate supervisor must also be returned by June 1.

Accepted applicants and alternates will be notified by June 15.

A letter of acceptance from the selected applicants and alternates must be forwarded to the Bureau of Educational Research and Testing Services no later than June 22.

Recreational Facilities

The University of New Hampshire is located in the southeastern part of the state, near beaches, lakes, mountains, and resort areas. On-campus facilities include a modern student union building, swimming pool, tennis courts, and fully equipped field house. In addition, the University sponsors a summer theater, concerts, recitals, films, and other events. Within walking distance are shops, restaurants, and churches. The cultural centers of Boston are less than 70 miles away.

A weekly recreational schedule will be posted for Institute members; group activities may be planned according to interests expressed.

Calendar

June 1, 1970. Application Form and Confidential Evaluation Form to be returned to the Bureau of Educational Research and Testing Services, University of New Hampshire, Durham, New Hampshire, 03824.

June 15, 1970. Notification of acceptance to be sent to the accepted applicants and alternatives.

June 22, 1970. Letter of acceptance from the selected applicants and alternatives must be forwarded to the Bureau of Educational Research and Testing Services.

BUREAU OF EDUCATIONAL RESEARCH AND TESTING SERVICES
P. O. BOX Q
DURHAM, NEW HAMPSHIRE 03824

UNIVERSITY OF NEW HAMPSHIRE
Department of Education

Telephone: 862-1826
862-1827
862-1046

June 1970

John Dow
123 Street
Durham, New Hampshire 03824

Dear Mr. Dow:

It is my pleasure to inform you that you have been selected as a participant in the 1970 USOE Title IV HEW Research Institute, "Planning for Educational Decision-Making in the 70's", to be held at the University of New Hampshire during the period July 6 through August 14, 1970.

Your application was chosen by the Selection Committee from a group of highly qualified candidates. Since this Institute is the only doctoral and post-doctoral program of its kind funded under the sponsorship of USOE/HEW's National Center for Educational Research and Development for FY 1970-71, you are to be congratulated for your selection as a participant in the Institute.

If you choose to accept your appointment as an Institute participant, you must confirm your commitment by telephone or cable no later than June 26, 1970. Failure to meet the confirmation deadline will require that you automatically be dropped from the list of primary Institue participants and an alternate will be selected from the list of alternate candidates.

Additionally, may we request that you also respond by mail no later than June 26 to the following required administrative items: (a) a letter of formal acceptance of appointment to the Institute group, and (b) submission of the required housing forms. A return envelope is enclosed for your convenience. Both of these items should be mailed directly to the Bureau of Educational Research and Testing Services to facilitate closure of our contractual requirements prior to your arrival at Durham and the opening of the Institute Program.

Again, congratulations are in order on your selection as an Institute participant. I am looking forward to meeting and working with you in the coming year.

Sincerely,

Albert R. Elwell
Institute Director

ARE/eg
Enc.

BUREAU OF EDUCATIONAL RESEARCH AND TESTING SERVICES
P. O. BOX Q
DURHAM, NEW HAMPSHIRE 03824

UNIVERSITY OF NEW HAMPSHIRE
Department of Education

Telephone: 862-1826
862-1827
862-1046

June 1970

John Dow
123 Street
Durham, New Hampshire 03824

Dear Mr. Dow:

I am sorry to inform you that you have not been selected as an active participant in the 1970 USOE Title IV HEW Research Institute, "Planning for Educational Decision-Making in the 70's", to be held at the University of New Hampshire during the period July 6 through August 14, 1970.

Your application was reviewed by the Selection Committee along with those of the total group of highly qualified candidates. Since this Institute is the only doctoral and post-doctoral program of its kind funded under the sponsorship of USOE/HEW's National Center for Educational Research and Development for FY 1970-71, the competition was extremely keen for the thirty participant positions allocated under the grant.

Although we were unable to offer you an appointment as a participant in the Institute, you are to be congratulated for your interest in national educational research and development activities. We anticipate that a series of similar institutes will be funded for FY 1971-72 at which time I would hope that your continuing interest in education would lead to an application to one of the regional institutes in the coming year.

Again, thank you for your interest in the 1970 HEW Research Institute. I am sure that you understand the competitive nature of the grant and the final decision of the Selection Committee relative to your application. Best wishes for the coming year.

Sincerely,

Albert R. Elwell
Institite Director

ARE/eg

1970 USOE TITLE IV HEW RESEARCH INSTITUTE

"Planning for Educational Decision-Making in the 70's"

GENERAL INFORMATION HANDBOOK

Summer 1970

U.S. Office of Education -- Title IV
Department of Health, Education and Welfare

NATIONAL CENTER FOR EDUCATIONAL
RESEARCH AND DEVELOPMENT

Bureau of Educational Research
and Testing Services
Department of Education
University of New Hampshire
Durham, New Hampshire 03824

FOREWORD

This General Information Handbook has been prepared to provide Institute participants and staff with a ready source of primary information to assist you in planning your Institute as well as recreational activities and to make the Institute experience professionally rewarding and personally pleasant.

Please feel free to contact the Bureau staff should you need additional and/or more precise information.

REGISTRATION INFORMATION

DATE AND LOCATION OF INSTITUTE REGISTRATION

Participants are required to check in on Sunday, July 5 between 2:00 P.M. and 8:00 P.M. at Stoke Hall.

Notes: Participants cannot be admitted and registered before or after the time period specified above.

If you do not plan to reside in the dormitory you must, however, report to the Institute registration desk at the time specified above.

IMMEDIATE ITEMS OF SIGNIFICANCE

At the time of registration each participant will receive the following items:

a. room and board allotment check;
b. meal ticket
c. parking permit (required--do not invite a ticket!);
d. list of required texts for purchase and reference

INITIAL INSTITUTE SESSION

The Institute's instructional program will begin on Monday, July 6. The following first-day schedule is suggested for your convenience:

a. breakfast will be served from 6:45 A.M. to 8:00 A.M. in the Huddleston Hall Dining Room;
b. participants will report to Room 218, WSBE (Whittemore School of Business and Economics -- commonly known as "Whiz-be"), building #40 on the campus map, at 8:30 A.M. for the initial Institute session;
c. participants may purchase all required textbooks from the University Bookstore at their earliest convenience.
d. additional information relative to the initial week of the Institute will be conveyed by Des Cook and staff.

FISCAL PAYMENT AND STIPEND SCHEDULE

Stipends Tuition and fees for participating members of the Institute are provided for under the accords of the HEW grant for the summer program.

Following acceptance, participants may receive a stipend of $75.00 per week plus $15. per week for each dependent for the period of attendance at the Institute. A maximum of 2.5 dependents will be guaranteed payment throughout the six weeks of the Institute. Additional dependency payment will be determined by the amount of funding available.

Participants will also receive travel expense payments for one round trip between their home and the University of New Hampshire. Travel payment will be made upon filing of travel voucher subsequent to termination of summer institute session.

Textbooks and supplies normally associated with graduate programs will be purchased by the enrollee.

Stipends will be paid bi-weekly on July 17, July 31 and August 14 in the following amounts:

July 5 (at registration) room and board allotment;
July 17 1/3 of remaining stipend;
July 31 1/3 of remaining stipend;
August 14 final 1/3 of stipend.

Payment of Charges for Room and Board The total cost for room and board is due to the University on July 5 (date of registration). A check in the amount due for room and board will automatically be deducted from the original stipend amount and presented to each participant at the time of Institute registration. The checks are to be immediately endorsed and returned to the Institute Secretary representing full payment for room and board charges for the duration of the Institute.

Income Tax Exclusion For Federal income tax purposes, Summer Institute subventions from funds of the U.S. Office of Education

(including stipends and dependency allowances) are considered by the Internal Revenue Service to constitute scholarship and fellowship grants, and are excludable from the gross income of the participants either wholly or in part, depending on whether the individual participant is or is not a candidate for a degree. The total subvention is excludable from gross income in the amount of $300.00 multiplied by the number of months for which the benefits are received up to a maximum total of 36 months.

NOTE: the above information is subject to changes reflected by 1970 IRS Codes.

For more detailed information, see Revenue Ruling 58-498, IRS Bulletin No. 1958-41, October 13, 1958, pp. 15-17, on file in IRS Offices; or consult your local IRS Office or tax consultant.

GENERAL INSTITUTE PROGRAM

SCHEDULE

The Institute's formal instructional sessions will be held daily, Monday through Friday, from 8:30 A.M. to 4:00 P.M. for the duration of the six-week program. On several days informal afternoon sessions will be held to provide participants with the opportunity to discuss individual needs and projects, to seek consultative assistance in problems associated with computer programming or statistics, or to allow for informal group or individual activities associated with the on-going Institute program.

ACADEMIC CREDIT

The two formal graduate credit courses being offered in the Institute are described below:

Education 881--Methods and Techniques of Educational Research. This course is a critical study of the principal methods employed in the investigation of educational problems and an evaluation of the procedures and standards used in reporting the findings; designed as an advanced graduate course for candidates for graduate degrees. (4 credits)

Education 882--Research Problems in Education. This course is concerned with the individual investigation of a problem in the area of educational research. It will be used first to expose the graduate candidates to a variety of educational research efforts reported in the literature. In the latter segment of the program, each candidate will be expected to develop a research proposal which will have practical importance and relevance to his local agency, institution or school, or to evaluate a project presently being studied. (2 credits)

CONSULTANTS IN COMPUTER PROGRAMMING AND STATISTICS	A Research Programmer and Statistician on the Institute staff at the Bureau of Educational Research and Testing Services will be available to all participants for consultative assistance throughout the duration of the Institute program.
REQUIRED TEXTS	A list of required texts for the Institute program will be distributed at the time of registration. All participants are expected to purchase these texts at the University Bookstore.
SUPPLEMENTARY TEXTS AND REFERENCE MATERIALS	A list of supplementary texts and reference materials will also be distributed at the time of registration. Several copies of these materials will be maintained at the University Library, the Institute library or the resource library at the Bureau of Educational Research and Testing Services. Additional reference materials may be obtained from several area sources such as the Department of Education at the University, etc. Should you require assistance in obtaining needed materials please contact an Institute staff member. Library hours are noted under the "Instructional Facilities" section of this Handbook.
IMPORTANT: P.D.K. MANUSCRIPT	*Manuscript copies of the P.D.K. text are being made available for instructional usuage at the Institute. This text is being made available through the courtesy of P.D.K. and Dr. Stufflebeam, et al.*
PLEASE NOTE	PLEASE -- ALL COPIES OF THE P.D.K. MANUSCRIPT MUST BE RETURNED TO DAN STUFFLEBEAM AT THE CONCLUSION OF THE FIFTH-WEEK SEGMENT OF THE INSTITUTE. WE CAUTION YOU NOT TO COPY ANY PORTION OF THIS TEXT WITHOUT THE EXPRESSED CONSENT OF DR. STUFFLEBEAM. YOUR COOPERATION IS CORDIALLY REQUESTED!!!!!!

PRINCIPAL INSTITUTE
CONSULTANTS AND CALENDAR

The following Institute calendar noted the primary consultant and scheduled instructional context. Occasionally, there will be additional guest lecturers who will develop in detail a discussion and analysis of a research activity of current concern. The principal Institute consultants are:

July 6 - 10	*Drs. Desmond Cook and Gregory Trezebratowski-- project management models and techniques;*
July 13 - 24	*Dr. Henry Walbesser and staff -- behavioral object design of assessment tasks and construction of learning sequences;*
July 27 - August 7	*Drs. Daniel Stufflebeam, Egon Guba and Robert Hammond --evaluation model and techniques, seminars on problematic simulations; a*
August 10 - 14	*Drs. William Asher and Daniel Heisey -- problems associated with developing, disseminating and adopting educational innovations.*

UNIVERSITY SERVICES AND RECREATIONAL FACILITIES

UNIVERSITY LIBRARY

The University Dimond Library contains 500,000 volumes, over 4,000 periodicals, a microfilm collection, and listening rooms for the record and tape collections. Newly expanded and renovated including air conditioning, the library provides pleasant and colorful study facilities and service areas.

UNIVERSITY BOOKSTORE

The University Bookstore carries all text books, related reading material, and classroom supplies which Institute participants may need. The Bookstore also carries a large selection of paperbacks of general as well as curricular interest. Bookstore hours: *Monday through Friday, 8:00 A.M. to 4:30 P.M.*

HEALTH SERVICE

University Health Service, located in Hood House, includes a 26-bed hospital and a well-equipped out-patient clinic for the diagnosis and treatment of ambulatory patients. Registered nurses are on duty 24-hours a day; University physicians and the University ambulance are always on call during the Summer Session. For ambulance service, *dial (86)2-1425; Hood House, dial (86)2-1530. If off-campus, dial 868-5531 for both services.*

MEMORIAL UNION BUILDING

The Memorial Union is a community center for students and faculty. With its extensive and well-planned facilities, it serves as a focal point for extra-curricular activities. In addition to meeting and conference rooms, the Union provides lounges, music-listening and television rooms, a cafeteria and snack-bar service, and a game area for table tennis, billiards, and bowling. The Memorial Union reception desk serves as an information center and is open daily from 8:00 A.M. through 10:00 P.M. *Reception desk telephone, (86)2-1527.*

PAUL CREATIVE ARTS CENTER

This facility includes exhibits by artists in residence and visiting exhibitions and artists are sponsored regularly. Scheduled exhibits are announced in weekly bulletin. The Center is the home of the *Johnson Theater* which offers regularly scheduled performances during the Summer Session.

OUTDOOR SWIMMING POOL

This facility is open during the following hours: *Monday through Friday -- 9:00 A.M. to 12 noon and 2:00 P.M. to 5:30 P.M.*
Saturday -- 9:00 A.M. to 12 noon and 2:00 P.M. 5:00 P.M.
Sunday -- 2:00 P.M. to 5:00 P.M.

The pool includes swimming and diving as as well as a wading area for young children. Lifeguards are on duty throughout the open hours.

Admission to the swimming pool is based upon three types of privileges:

a. *Summer Session* - denoted by special ticket. Each session student is allowed one ticket for his own use. These tickets may be obtained at the pool upon presentation of a Summer Session identification card. Rate for the 6-week institute is $6. Any participant wishing pool privileges for his immediate family should subscribe to the season family privileges as outlined below.

b. *Family* - Season tickets may be obtained for each member of one's immediate family (i.e., husband, wife, dependent sons and daughters) at a family rate of $25. Tickets may be purchased at the pool office with proper identification.

c. *Guest* - guests of any person holding a regular privilege ticket may purchase a daily pool ticket. This will entitle the holder to pool use for one day only. Cost of the ticket is 50¢ and are available at the pool office. (Note: should you own a regular ticket but not in your possession, you may purchase a daily ticket as above.)

TENNIS COURTS

Several University tennis courts are available for open use. Special lighting makes night tennis possible on some courts. The courts are available free of charge.

LUNDHOLM GYMNASIUM AND FIELD HOUSE

This facility includes indoor swimming pool, handball courts, basketball courts, etc. Nominal fees are charged dependant upon facility being used. Outdoor facilities include a track and other recreational facilities.

PRINCIPAL INSTITUTE INSTRUCTIONAL AND SUPPORTIVE FACILITIES

PRINCIPAL CLASSROOM BUILDING

Several lecture and informal discussion rooms of the new Whittemore School of Business and Economics Building (WSBE) will be utilized for instructional presentations. Flexible usage of these facilities have been obtained for the Institute including access to the "Hex" room for informal group discussions.

COMPUTATION CENTER

The Computation Center located in Kingsbury Hall houses an IBM 360-50 and all necessary supportive data processing configurations including remote access terminals. The participants should contact *Richard Burrows, Manager at (86)2-4323* for formal introduction to the facilities of the Center. Access to the Center for data analysis and processing requirements should be coordinated Don Bailey of the Institute staff.

LIBRARY FACILITIES

In addition to the University Dimond Library described earlier, several supplementary library and reference facilities will be maintained for participant usage. These facilities include an Institute library housed in the living unit, the reference library of the Bureau of Educational Research and Testing Services, and the library resource center of the Department of Education. Specialized materials will be made available in several relevant curricular areas -- such as the Reading Clinic -- and academic departments may be contacted for additional professional materials.

AUDIO-VISUAL CENTER

The Audio-Visual Center, located on the first floor of Hewitt Hall, is open daily from 8:00 A.M. to 4:30 P.M. The Center is equipped with projection equipment and workrooms. *Contact John Bardwell, Director, at (86)2-2210 for further assistance or inquiry.*

WENH-TV

The television studios are located in the lower level of the Memorial Union Building. This educational television station has been actively involved in developing and programming regional in-service programs for teachers under ESEA Titles I and III, and is equipped with closed circuit capabilities and an inventory of films. *William Brady at (86)2-1047 is Director of Instructional Services.*

BUREAU OF EDUCATIONAL RESEARCH AND TESTING SERVICES

The Bureau is open Monday through Friday from 8:00 A.M. to 4:00 P.M. and is located in the Verrette House. In addition to the reference library noted previously, the Bureau maintains extensive data processing, optical scanning and document reproduction facilities.

Principal Bureau staff associated with the Institute are identified later in the Handbook. Feel free to contact any member of the Bureau staff for consultative assistance or just for informal discussions relative to personnel ideas and projects. The Regional Training Project for New Hampshire and Vermont Head Start Program is an example of an on-going Bureau project as is the development of specifications for the New Hampshire Statewide Testing Programs which will be implimented in Sept.

DEPARTMENT OF EDUCATION

The majority of faculty and facilities are housed in Morrill Hall. The Reading Clinic and Counseling Facilities are located in Murkland Hall. Again, feel welcome to share your ideas and to discuss current projects with the staff of the Department.

CENTER FOR EDUCATIONAL FIELD SERVICES

The Center is located in the Verrette House and serves as a consultative and clearing house for educational projects associated with professional employee relations, informational services, legal and legislative services, long-range fiscal and plant planning and services to school board personnel and school administrators. *Jason Boynton, Director, may be contacted at (86)2-1826.*

LOCATIONS OF MAJOR ACADEMIC DEPARTMENTS AND ADMINISTRATIVE SERVICES

Consult University Centrex Directory, pages 7-11 or call University Switchboard (86)2-1234.

DINING FACILITIES

Institute participants will utilize the Huddleston Hall Dining Room located on Mair Street. Hours of service are:

Breakfast -- 6:45 A.M. - 8:00 A.M.
Luncheon -- 11:30 A.M. - 1:00 P.M.
Dinner -- 4:45 P.M. - 6:00 P.M.

PRINCIPAL INSTITUTE STAFF AND SUPPORTIVE PERSONNEL

INSTITUTE/BUREAU STAFF

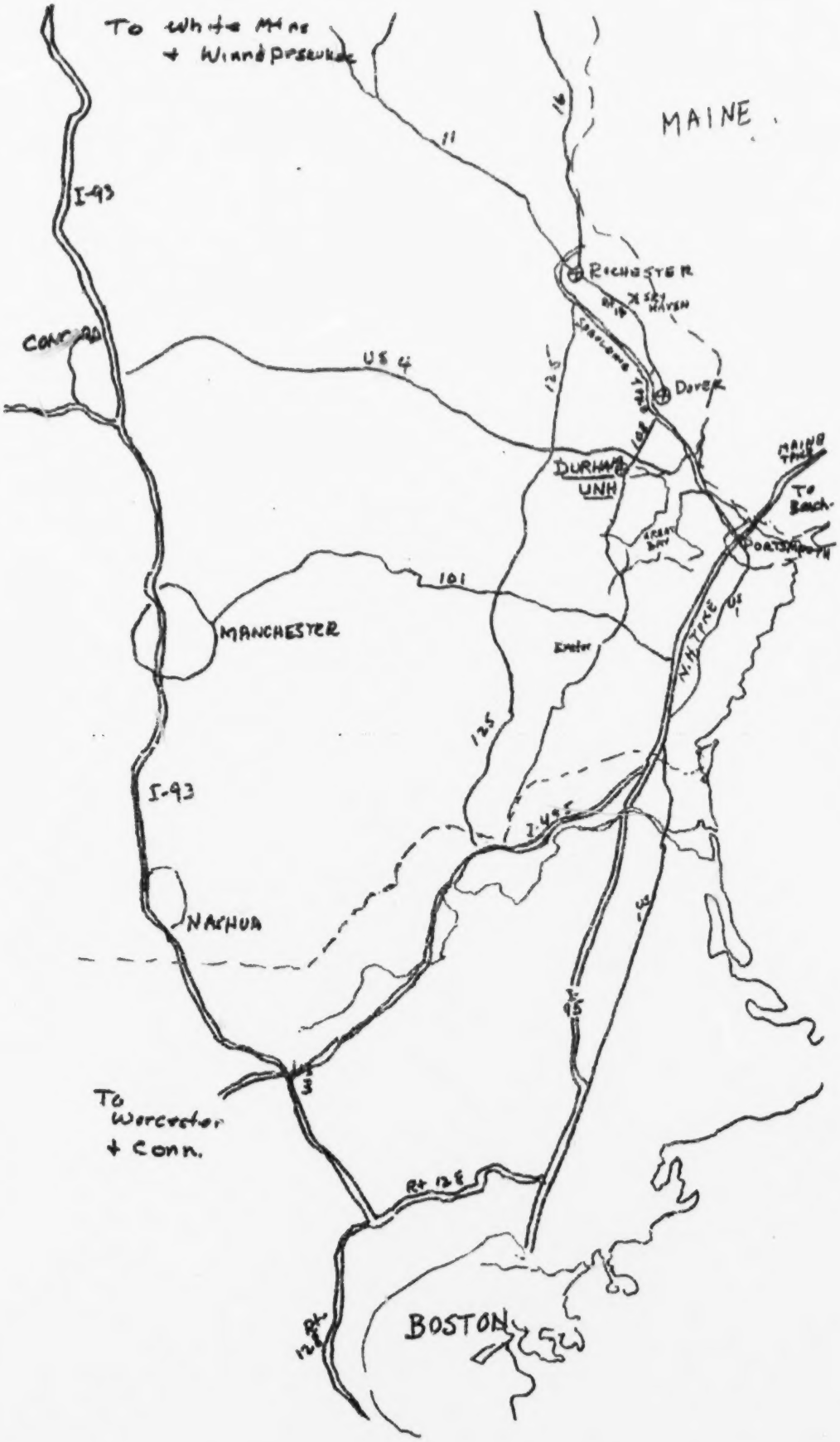
Albert Elwell	*"Al"*	*Institute Director*
Donald Bailey	*"Don"*	*Research Programmer and Consultant*
Everett Barnes	*"Ev"*	*Administrative Assistant and Technical Staff Assistant*
Sarah Curwood	*"Sarah"*	*Orientation Consultant*
Elaine Gardner	*"Elaine"*	*Institute Secretary and Technical Staff Assistant*
Carl Kleiner	*"Carl"*	*Coordinator, Program Maintenance and Statistical Consultant*
Maurice Olivier	*"Moe"*	*Coordinator, Instructional Components (Bureau)*
Robert Zelonis	*"Bob"*	*Coordinator, Operations Component (Bureau)*

GUEST CONSULTANTS

Desmond Cook	*"Des"*	*Ohio State University*
Gregory Trezebratowski	*"Greg"*	*Ohio State University*
Henry Walbesser	*"Henry"*	*University of Maryland*
Richard Rosen	*"Dick"*	*University of Maryland*
Daniel Stufflebeam	*"Dan"*	*Ohio State University*
Egon Guba	*"Egon"*	*Indiana University*
Robert Hammond	*"Bob"*	*Ohio State University*
William Asher	*"Bill"*	*Purdue University*
Daniel Heisey	*"Dan"*	*University of New Hampshire*

TRANSPORTATION INFORMATION AND ROUTING SUGGESTIONS

GEOGRAPHIC LOCATION OF THE UNIVERSITY OF NEW HAMPSHIRE	The University of New Hampshire at Durham is located in the southeast part of the state. The campus may be reached by any of the following modes of transportation:
AIR (COMMERCIAL)	Logan International Airport, Boston, Massachusetts is approximately 70 miles south of Durham and is served by most major airlines. Automobile, limousine or automobile rental service will be required to reach the University from Logan Airport.
AUTOMOBILE ROUTING	Automobile Routing -- Logan to Rt. C-1 North to US Route 1 North into Interstate 95, North to Portsmouth, N.H. Traffic Circle; then N.H. Route 4 West 10 miles to Durham.
AUTOMOBILE RENTAL	Automobile Rental -- Hertz, Avis and National Rental services are available at Logan Airport. Follow suggested automobile routings noted above.
LIMOUSINE SERVICE	Limousine Service -- C & J Limousine serving from Logan Airport to the Seacoast Region and Durham. (One-way fare: $7.00; round-trip fare: $14.00.) Limousine departs from Eastern and American Terminals at Logan Airport. See enclosed schedule.
AIR (PRIVATE)	Sky Haven Airport, Rochester, New Hampshire. 3100 ft. paved runway, lighted no tower or traffic control no landing fee $1.00 tie-down fee, overnight no hanger facilities From Sky Haven take Route 16 south to traffic circle, then access road to Spaulding Turnpike. Turnpike south to Exit 7 (Rt. 108), Rt. 108 into Durham and the University.
TRAVEL AGENCY	Richardson's, Dover, N.H. Telephone: 742-6100


To White Mtns
+ Winnipesaukee
MAINE
11
16
I-93
ROCHESTER
NEW HAVEN
CONCORD
US 4
125
DOVER
DURHAM
UNH
To Beach
PORTSMOUTH
101
MANCHESTER
Exeter
N.H. TPKE
125
I-93
I-495
NASHUA
95
To Worcester
+ Conn.
Rt 128
BOSTON

CLIMATE AND APPROPRIATE CLOTHING

During the months of July and August days are warm but the evenings are generally cool. At times, both days and nights are hot and humid. These "heat waves" are apt to be followed by rain showers.

Participants are encouraged to bring clothing appropriate for the climate and for the types of activities they may choose to pursue. For daily work sessions, cool comfortable clothing is recommended. Men are not required to wear suits and ties.

It is well to include also rainwear, sweaters, sports clothes, and clothing for week-end social activities.

COMMUNITY SERVICES

AUTOMOBILE REPAIRING AND SERVICE

Cobb's Citgo Service - Dover Road - 868-7724
Durham Shell Station - 2 Main Street - 868-2331
Sony's Esso Station - Dover Road - 868-7719
H. R. Haines Company - 2 Dover Road - 868-5536 (AAA)
Monroe and Sons Gulf Station - Dover Road - 868-7722
Sunoco Station - Dover Road - 868-7785

BANK

Durham Trust Company - Madbury Road - 868-5574
Hours: Monday through Thursday - 9:00 A.M. to 2:00 P.M.
Friday - 9:00 A.M. to 2:00 P.M. and 4:00 P.M. to 6:00 P.M.

BARBER SHOPS

Campus Barber Shop - Main Street
College Barber Shop - Main Street
University Barber Shop - Main Street

BEAUTY BARS

Color and Curl - Jenkins Court - 868-2223
Norman's Hair Stylists - Main Street - 868-2231

BUS SERVICE

College Corner Bus Depot - Main Street - 868-7411
Busses from Boston and Northern points stop regularly for passenger service.

CHURCHES

The Community Church - Main Street - Rev. Meury, Minister
Sunday Services at 9:15 A.M. - 868-2435

St. George's Episcopal Church - Main Street - Rev. Albert Snow
Sundays - 8:30 A.M. - The Holy Communion
10:30 A.M. - Family Service of Morning Prayer or Holy Communion
Thursdays - 9:00 A.M. - The Holy Communion

St. Thomas More (Roman Catholic) - Madbury Road - Rev. Vincent Lawless
Sunday Masses - 8:00 A.M., 10:00 A.M., and 11:30 A.M.
Saturday - 5:00 P.M. and 6:45 P.M.
Weekday Masses - 5:00 P.M.

DENTIST

Dr. Michael S. Bales - 38 Main Street - 868-2311
Dr. Peter Low - Ballard Street - 868-9621

DRUG/Cosmetic supplies

Brooks Discount Store - Mill Road - 868-7886
Town and Campus - Main Street - 868-9661
NOTE: There is no registered pharmacist in Durham. Prescriptions may be filled at Newman's Pharmacy, 1 Silver Street, Dover, 742-1563

HOSPITAL

Wentworth-Douglass Hospital - 789 Central Avenue, Dover -742-5252
Hood House - Main Street - 862-1530

LAUNDRY AND DRY CLEANERS

The College Shop - Main Street - 868-2220
Durham Laundercenter - 46 Main Street - 868-7735 (self-service)
Great Bay Cleaners - Jenkins Court - 868-2488
Wildcat Wash - Mill Road

NEWSPAPERS AND MAGAZINES

Town and Campus - Main Street - 868-9661
Young's Donut Shop - Main Street - 868-2688

PHYSICIAN

Hood House Infirmary - Campus - (86)2-1530
Dr. Rudolph Hoene - Mast Road - 868-2261 (internal medicine and allergy)
Dover office: 742-3664
Dr. Joseph Evora - Madbury Road - 868-7595

POST OFFICE

Main Street - 868-2151

PUBS

The Down Under - lower level College Corner - 868-7411
The Keg Room - lower level Pizza Den - 868-2485
The Wildcat Pizza - Main Street - 868-5530

SHOE REPAIR

Price's - Main Street - 868-7410
Shoes left here to be sent to Dover Shoe Hospital. Rapid service available.

SNACK BARS

College Corner - 56 Main Street - 868-7411
The Dairy Bar - off Main Street (old railroad station)
Little Horn - Main Street - 868-2300
Pizza Den - Main Street - 868-2485
Wildcat Pizza - Main Street - 868-5530
Young's - Main Street - 868-2688

STORES

Clothing - The College Shop - Main Street - 868-2220
Perkins, Ltd. - Mill Road - 868-5366
Shaine's Clothing Store - Jenkins Court
Yankee Drummer - Main Street - 868-2174

Food - Community Market - Main Street - 868-2521
Durham Shop and Save - Mill Road - 868-2500
Newsky's Ideal Food Store - Madbury Road -868-2121

Gifts - Durham House - 44 Main Street - 868-2583
Price's Record Shop - Main Street - 868-7410
Red Carpet - Main Street - 868-9661 (Town and Campus)

Hardware - Hardware House - Jenkins Court - 868-9601
Home Care Center - Mill Road - 868-5224

TRAVEL AGENCY

Richardson Agency - 600 Central Avenue, Dover - 742-6100

TYPEWRITER RENTAL

E. H. Quimby and Company - 362 Central Avenue, Dover - 742-3515

COMMUNITY AND AREA RECREATIONAL FACILITIES

BEACHES (ocean, all within thirty miles of Durham)

in New Hampshire
Hampton - Route 1A - Hampton
North Hampton - Route 1A - North Hampton
Rye - Route 1A - Rye
Wallis Sands - Route 1A - Wallis Sands

in Maine
Long Sands and Short Sands - Route 1A - York, Maine
Ogunquit Beach - Ogunquit, Maine
Wells Beach - Wells, Maine

HISTORICAL SITES IN NEW HAMPSHIRE

Hudson (near Nashua) - Benson's Animal Farm (great for adults and children)

Concord - State Capitol and historical museums

Exeter - Revolutionary capital of New Hampshire; Garrison House (1650-1750); Phillips - Exeter Academy

Farmington - Schuller Museum - Medieval arms and armor, palace furniture

Manchester - largest city (pop. 80,000+); varied exhibitions; shopping centers

Mystery Hill - North Salem off Rt. 111. Man-made rock sculptures; archeological excavations. Artifact display; picnicing.

New Castle - E. of Portsmouth at Piscataqua River - Ft. William and Mary; boating and fishing.

Portsmouth - Colonial capital of New Hampshire. Strawberry Bank; several historical homes and buildings open to public; shops.

(Also, consult Durham Historical Society -- Town Hall, Main Street for additional touring suggestions).

HIKING, FISHING, CLIMBING AND CAMPING

White Mountain National Forest (70 miles north) includes Wilderness Highway, several routes for touring White Mountain area; trails, campgrounds, and 6,288' Mt. Washington in the Presidential Range--summit accessible by auto road (toll), cog railway or on foot trails; late "Spring Skiing" may still be possible at Tuckerman's Ravine (natural glacial bowl).

Lakes Region - Central New Hampshire - boating, camping, fishing, swimming.

DINING AND ENTERTAINMENT

RESTAURANTS

In Durham
New England Center for Continuing Education (adjacent to the campus) excellent cuisine; phone for reservations (86)2 -2800

In Newington, N.H. (10 minute drive)
The Mariner, Dover Road -- 742-5414
Flagstones, Dover Road -- 436-5726
Newick's (seafood), Dover Point Road -- 742-3205

In Dover, N.H. (15 minute drive)
Howard Johnson's, Central Avenue -- 742-1890
Ramada-Sterling Motor Inn, Silver Street -- 742-4100
Weeks' Ice Cream Shop and Char-Grill, New Rochester Road --742-5055

In Portsmouth, N.H. (20 minute drive)
Fisherman's Pier (seafood specialty), State Street --436-7664 (phone for reservations)
Holiday Inn, Rotary Circle
Howard Johnson's, Rotary Circle
Meadowbrook Motor Inn, Rotary Circle -- 436-2700
Yoken's Thar She Blows, Rt. 1, Lafayette Road -- 436-8224

In New Castle, N.H. (20 minute drive)
Wentworth-By-The-Sea, New Castle (phone for reservations)

In Rye, N.H. (25 minute drive)
South Wind (Chinese-American), Rt. 1, Lafayette Road -- 964-5545

In Exeter, N.H. (25 minute drive)
Exeter Inn, 90 Front Street -- 772-5058 (phone for reservations)
Kurtz Restaurant, Walter Street -- 772-8974
Weeks' Ice Cream Shop and Char-Grill, Rt. 108 -- 772-5901

In Hampton, N.H. (30 minute drive)
Bob Taylor's Homestead, off Hampton-Exeter Expressway -- 772-4386 (phone for reservations)
Lamie's Tavern, Rt. 1, 490 Lafayette Road --962-8911

In Rochester, N.H. (30 minute drive)
Cardinal's Restaurant, Rt.11 -- 332-6110
Colby's Restaurant -- 332-9891

In Kittery, Maine (30 minute Drive)
Dragon Seed (Chinese-American), State Road -- 207-439-1100
Valle's Steak House, Interstate Highway -- 207-439-0010
Warren's Lobster House, Water Street -- 207-439-1630

In York, Maine (40 minute drive)
Barnett's Restaurant, 16 Long Sands Road -- 207-363-4902
The Goldenrod Luncheonette and Fountain, York Beach -- 207-363-2621
Spiller's Restaurant, Ocean Avenue -- 207-363-3903
Nubble Light Dining Room, Nubble Point -- 207-363-4054
Yorkway Restaurant, 63 U.S. Route 1 South -- 207-363-4453

THEATERS

The summer movie and drive-in theaters in the area are listed below:

In Durham, New Hampshire
Summer theater - University of New Hampshire - Paul Creative Arts Center - information (86)2-1234
Movie theater - The Franklin - Jenkins Court - 868-2751

In Dover, New Hampshire
Movie theaters - Strand - 93 Third Street - 742-2454
Uptown - 4 Broadway
Drive-in theater - Route 16 - Rochester Road - 742-3559

In Newington
Drive-in theater - Newington - 436-2409

In Portsmouth, New Hampshire
Summer theater - Theater by the Sea - Ceres Street - 431-6660
Movie theaters - Civic - Chestnut Street - 436-5710
Cimema - 10 Congress Street - 436-2605

In Raymond, New Hampshire
Movie theater - Icka Theater - 772-2222

In Rochester, New Hampshire
Summer theater - Rochester Music Theater - 332-2919
Drive-in theater - Rochester Drive-in - Milton Road - 332-3204

In Hampton, New Hampshire
Summer theater - Hampton Playhouse - 357 Winnacunnet Rd. - 926-3073
Movie theaters - Casino Theater - 159 Ocean Boulevard -926-2233
Surf Theater - 265 Ocean Boulevard - 926-3091
Drive-in theater - Seacoast Drive-in - Lafayette Road

In Kittery, Maine
Drive-in theater - Kittery-York - State Road - 207-439-9328

In Ogunquit, Maine
Summer theater - Ogunquit Playhouse - Route 1

In Arundel, Maine
Summer theater - Arundel Playhouse - Route 1

"THIS WAS SOMETIME A PARADOX,

BUT NOW THE TIME GIVES IT PROOFE."

Hamlet

Educational Program Management Center
Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

PRESENTATION OUTLINE
FOR
PROJECT MANAGEMENT COMPONENT

Planning for Educational Decision Making in the '70's

H.E.W. Institute

July 6-10, 1970

University of New Hampshire
Durham, New Hampshire

College of Education
The Ohio State University
Columbus, Ohio 43210

Session No._____Date_____Instructor_____

Topic: Nature of Project Management

A. Project Management Defined:

B. Project Characteristics:

1. Objective:

2. Complexity:

3. Uncertainty:

4. Terminal Date:

C. Organizational Structure of Projects:

1. Single Person:

2. Independent Unit:

3. Function Placement:

4. Organization overlay:

D. Factors in Project Management Effectiveness:

Educational Program Management Center
Educational Development Faculty
College of Education

Session No._____Date_____Instructor_____

Topic: Systems Theory and Principles

A. The System Approach:

1. The "System" Viewpoint - A Conceptual Tool

2. Wholelistic - Not Variable vs. Variable

3. Uses a Common Language

4. Uses Cybernetic Principles for System Control

5. Is Concerned about Interrelationships of Components/Variables

B. Definition of Terms

C. Identifying Component of a Simple System

D. A General Problem Solving Model

Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

Session No._____Date_____Instructor_____

Topic: A Model System for Project Planning and Evaluation

A. Management Functions

1. Planning
2. Organizing
3. Directing
4. Controlling

B. Management Process or Cycle

1. Establish Objectives
2. Develop Plans
3. Set Schedules
4. Measure Progress
5. Replanning or Recycle

C. Management Information Systems

1. Concept of Data Base
2. Data Base Elements for Project Management
   a. Time
   b. Cost
   C. Performance

D. Introduction to Project Management System Model

A. Planning Subsystem

B. Control Subsystem

Educational Program Management Center
Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

Session No._____Date_____Instructor_____

Topic: Establishing Project Objectives

A. Viewing the project as a system:

B. The Concept of project definition:

1. Hierarchial Nature of Projects

2. Stating the overall mission

3. Developing the hierarchy of objectives, tasks, functions, processes,etc.

4. The concepts of levels

C. Pictorial Representation of Project Definition

D. Project Definition as means of establishing Performance Specifications:

Educational Program Management Center
Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

Session No._____ Date_____ Instructor_____

Topic: Developing Work Flow

A. Functions of Work Flow Development

B. Probabilistic vs. Determistic Systems

1. Networking

2. Gantt Charts

C. Flow Graphs

1. Arcs

2. Nodes

D. Networking as a Special Case of Flow Graphs

1. Network

2. Activity

3. Event-Milestone Events

4. Constraint and Dependence

E. Basic Networking Rules

The Ohio State University
Columbus, Ohio 43210

Session No._____ Date_____ Instructor_____

Topic: Developing Project Schedules

A. Deterministic and Probabilistic Time Estimates:

B. Estimating Procedures:

C. Scheduling Defined:

D. Major Scheduling Problems:

1. Time Constrained:

2. Resource Constrained:

E. Time/Cost/Performance Tradeoffs:

Educational Program Management Center
Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

Session No._____ Date_____ Instructor_____

Topic: Cost Estimating and Budgeting

A. Function of Budget:

B. Types of budgets:

1. Accounting:

2. Management:

C. Developing a Management Budget:

D. Objective, Schedule, Budget Relationships:

Educational Program Management Center
Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

References and Bibliography

on

Educational Project Management

Compiled by Desmond L. Cook

September 1969

The Nature of Project Management

1. Gwen Andrew, "Some Observations on Management Problems in Applied Social Research," The American Sociologist, May 1967, pages 84-89.

2. John S. Baumgartner, Project Management, Richard D. Irwin, Inc., Homewood, Illinois, 1963.

3. David I. Cleland, "Why Project Management?" Business Horizons, 7:81-88, 1964.

4. K. Davis, A Preliminary Study of Management Patterns of Research Project Directors in Manufacturing in the Phoenix Area, Western Management Science Center, Arizona State University, Tempe, Arizona, 1961.

5. John Dearden and F. Warren McFarlan, Management Information Systems: Texts and Cases, Richard D. Irwin, Inc., Homewood, Illinois, 1966, Chapter 4.

6. Paul O. Gaddis, "The Project Manager," Harvard Business Review, 37:89-97, June 1959.

7. Paul O. Gaddis, "The Project Manager...his role in Advanced Technology Industry," Westinghouse Engineer, Vol. 18-19, 1958-59, pages 102-106.

8. R. E. Gibson, "A Systems Approach to Research Management," Research Development and Technological Innovation, James R. Bright (Ed.), Richard D. Irwin, Inc., Homewood, Illinois, 1964.

9. S. Groueff, Manhattan Project: The Untold Story of the Making of the Atomic Bomb, Bantam Books, Inc., New York, 1967.

10. IBM Systems 360, Project Management Systems Application Description, H20-0201-0, International Business Machines, White Plains, New York, 1966.

11. E. S. Keats, "How to Become a Good Project Manager," Aerospace Management, August 1963, pages 20-23.

12. A. V. Mahan, Criteria for the Use of Project Management, Unpublished MBA Thesis, The Ohio State University, 1966.

13. T. A. Mahoney, "Predictors of Managerial Effectiveness," in Building the Executive Team, Prentice-Hall, 1961, pages 186-197.

14. C. J. Middleton, "How to Set up a Project Organization," Harvard Business Review, March-April 1967.

15. Ross Mooney, "Problems in Initiating a Project," Theory Into Practice, 5:139-143, June 1966.

16. M. J. Peck and R. M. Scherer, The Weapons Acquisition Process: An Economic Analysis, Graduate School of Business, Harvard University, 1962.

17. D. C. Robertson, Project Planning and Control, Chemical Rubber Company, Cleveland, Ohio, 1967.

18. G. A. Steiner and W. G. Ryan, Industrial Project Management, The MacMillan Co., 1968.

19. H. S. Woodgate, Planning by Network, Business Publications, Ltd., London, England, 1964.

Nature and Functions of Management

1. Robert N. Anthony, Planning and Control Systems: A Framework for Analysis, Division of Research, Graduate School of Business Administrat Harvard University, Boston, 1965.

2. J. C. Emery, Organizational Planning and Control Systems, The MacMillan Company, 1969.

3. B. E. Goetz, Management Planning and Control, McGraw-Hill Book Company, New York, 1949.

4. R. A. Johnson, F. E. Kast, and J. E. Rosenzwieg, The Theory and Management of Systems, McGraw-Hill Book Company, New York, 1963.

5. Charles H. Kepner, and Benjamin B. Treboe, The Rational Manager, McGraw-Hill Book Company, New York, 1965.

6. Harold Koontz and Cyril O'Donnell (Ed.), Management, A Book of Readings, McGraw-Hill Book Company, New York, 1964.

7. Harold Koontz and Cyril O'Donnell (Ed.), Principles of Management, McGraw-Hill Book Company, New York, 1964.

8. P. P. Le Breton and D. A. Henning, Planning Theory, Prentice-Hall Inc., Englewood Cliffs, New Jersey, 1961.

9. William H. Newman and Charles E. Summer, Jr., The Process of Management, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1961.

10. H. A. Simon, The New Science of Management Decision, Harper and Row, New York, 1960.

The Management Process or Cycle

1. Robert N. Anthony, Planning and Control Systems: A Framework for Analysis, Division of Research, Graduate School of Business Administration, Harvard University, Boston, 1965.

2. F. de P. Hanika, New Thinking in Management, Hutchinson and Co., Ltd., 178-202 Great Portland Street, London, England, 1965.

3. Lauren B. Doyle, "Perpetual User Studies," Datamation, Vol. 12, October 1966, pp. 28-30.

4. Robert V. Head, "Management Information Systems: A Critical Appraisal," Datamation, May 1967, pp. 22-27.

5. Harold Koontz, and Cyril O'Donnell (Eds.), Management: A Book of Readings, McGraw-Hill Book Co., 1964.

6. Charles T. Meadow, The Analysis of Information Systems, John T. Wiley and Sons, Inc., New York, 1967.

7. Adolph F. Moravec, "Using Simulation to Design a Management Information System," Management Services, Vol. 3, No. 3, May-June 1966, pp. 50-58.

8. William H. Newman, and Charles E. Summer, Jr., The Process of Management, Prentice-Hall, Englewood Cliffs, New Jersey, 1961.

9. PERT..... Guide for Management Use, U. S. Government Printing Office, 1963.

10. Herbert Simon, The New Science of Management Decision, Harper and Row Publishers, New York, 1960.

11. H. S. Woodgate, Planning By Network, Business Publications Limited, 180 Fleet St., London, England, 1964.

Management Systems

1. Russell D. Archibald and Richard L. Villoria, Network-Based Management Systems (PERT/CPM), John Wiley and Sons, Inc., 1967.

2. Kenneth Bouilding, "General Systems Theory - The Skeleton of a Science," Management Science, April 1956.

3. Wallace Clark, The Gantt Chart, The Ronald Press Co., New York, 1923.

4. Desmond L. Cook, Better Project Planning Through the Use of System Analysis and Management Techniques, Educational Program Management Center, College of Education, The Ohio State University, Columbus, Ohio, November 1967.

5. F. de P. Hanika, New Thinking in Management, Hutchinson & Company, Ltd., 178-202 Great Portland St., London, England, 1965.

6. Nathan Goldfarb and William K. Kaiser, Gantt Charts and Statistical Quality Control, Hofstra University Yearbook of Business, Hemstead, New York, 1964.

7. Department of Navy, Office of Naval Material, Line of Balance Technology. Navexos P1851 (Rev. 4-62).

8. Robert Miller, Schedule, Cost, and Profit Control with PERT, McGraw-Hill Book Company, New York, 1963.

9. Gerald Nadler, "Engineering Research and Design in Socio-Economic Systems," Engineering (A. Riesman, Ed.), University of Wisconsin, 1967.

10. Martin Kenneth Starr, Production Management Systems and Synthesis, Prentice Hall Inc., Englewood Cliffs, New Jersey, 1964.

11. H. L. Wattel (Ed.), Network Scheduling and Control Systems, The Dissemination of New Business Techniques, Hofstra University Yearbook of Business, Volume 2, January 1964.

12. J. H. Greene, Operations Planning and Control, R. D. Irwin Inc., Homewood, Illinois, 1967.

Project Definition

1. R. D. Archibald and R. L. Villoria, Network-Based Management Systems, John Wiley and Sons, 1967, Chapter 2.

2. J. S. Baumgartner, Project Management, Richard D. Irwin, Inc., 1963, Chapter 2.

3. D. L. Cook, Better Project Planning Through System Analysis and Management Techniques, Educational Project Management Center, College of Education, The Ohio State University, 1967.

4. D. L. Cook, "The Use of Systems Analyses and Management Systems in Project Planning and Evaluation," Socio-Economic Planning Sciences, 2:389-397, 1969.

5. D. L. Cook, PERT: Applications in Education, Cooperative Research Monograph Number 17, U. S. Office of Education, 1966, Chapter 2.

6. J. C. Emery, "The Planning Process and Its Formalization in Computer Models," in J. Spiegel and D. E. Walker (Eds.), Second Congress on the Information Sciences, Spartan Books, Washington, D. C., 1965.

7. C. H. Granger, "The Hierarchy of Objectives," Harvard Business Review, 42:63-74, May-June 1964.

8. Handbook for PERT and Companion Cost System, National Aeronautics and Space Administration, October 30, 1962, Section III.

9. W. H. Huggins, "Flow Graph Representation of Systems" Operations Research and Systems Engineering, Johns Hopkins Press, pages 609-636.

10. PERT. . . Guide for Management Use, U. S. Government Printing Office, 1963, Chapter 2.

11. Program Evaluation and Review Technique (PERT), AMC Regualtion 11-29, Headquarters, U. S. Army Material Command, Washington, D. C., June 1966.

12. M. K. Starr, Production Management Systems and Synthesis, Prentice-Hall Inc., 1964, pages iii-vi.

13. H. S. Woodgate, The Planning Network as a Basis for Resource Allocation, Cost, Planning and Project Profitability Assessment, Management System Department, International Computers and Tabulators Ltd., London, England, 1967.

Developing the Work Flow

1. R. D. Archibald and R. L. Villoria, Network Based Management Systems, John Wiley and Sons, New York, 1967, Chapter 3 and Appendix B.

2. Desmond L. Cook, PERT: Applications in Education, Cooperative Research Monograph Number 17, U. S. Government Printing Office, October 1966.

3. Desmond L. Cook, "The Use of Systems Analysis and Management Systems in Project Planning and Evaluation," Socio-Economic Planning Sciences, 2:389-397, 1969.

4. K. L. Dean, Fundamentals of Network Planning and Analysis, UNIVAC Division, Sperry Rand Corporation, January 1962.

5. W. H. Huggins, "Flow Graph Representation of Systems," in Operations Research and Systems Engineering, John Hopkins University Press, 1960, Pages 609-636.

6. D. G. Malcolm, J. H. Roseboom, C. E. Clark, and W. Fazar, "Application of a Technique for Research and Development Program Evaluation," Operations Research, 7:646-669, September 1959.

7. PERT Fundamentals, Volume I - Networking, U. S. Government Printing Office.

8. PERT . . . Guide for Management Use, PERT Coordinating Group, Washington, D. C.

9. Planning and Scheduling with PERT and CPM, Entelek Inc., Newburyport, Mass.

10. D. M. Stires and M. M. Murphy, Modern Management Methods - PERT and CPM, Materials Management Institute, Boston, Massachusetts, 1964.

11. H. S. Woodgate, Planning by Network, Business Publications Limited, London, England, 1964.

Time Estimating Procedures

1. G. C. Bailey, Predicting Research and Development Performance Time, International Business Machines Corporation, Federal Systems Division, 1962.

2. G. C. Bailey, Research and Development Performance Time Estimation, Management Science Report MS-2, International Business Machines Corporation, Bethesda, Maryland, 1962.

3. Charles E. Clark, "The PERT Model for the Distribution of an Activity Time," Operations Research, 10:405-407, 1962.

4. Desmond L. Cook, PERT: Applications in Education, OE Monograph No. 17, U. S. Government Printing Office, October 1966, Chapter 2.

5. W. A. Donaldson, "The Estimation of the Mean and Variance of a PERT Activity Time," Operations Research, 13:382-385, 1965.

6. Frank E. Grubbs, "Attempts to Validate Certain PERT Statistics or Picking on PERT," Operations Research, 10:912-916, 1962.

7. John D. Ferguson, "Determining the Probablity of Meeting a Schedule with PERT," Journal of Data Management, 3:89, June 1965.

8. L. S. Hill, Towards an Improved Basis of Estimating and Controlling R and D Tasks, RAND Corporation, Santa Monica, California, May 1966.

9. W. R. King, "Project Planning Using Network Simulation," Pittsburg Business Review, 9:1-8, September 1968.

10. W. R. King and T. A. Wilson, "Subjective Time Estimates in Critical Path Planning," Management Sciences, Vol. 13, January 1967.

11. W. R. King, D. M. Wittevrondel, and K. D. Hezel, "On the Analysis of Critical Path Time Estimating Behavior," Management Sciences, Vol. 14:79-84, September 1967.

12. Lukaszewicz, "On the Estimation of Errors Introduced by Standard Assumptions Concerning the Distribution of Activity Duration in PERT Calculations," Operations Research, 13:326-327, 1965.

13. K. R. Mac Crimmon and C. A. Ryavec, An Analytic Study of the PERT Assumptions, The RAND Corporation, Santa Monica, California, 1962. (See also Operations Research 12:16-37, 1964)

14. D. G. Malcolm, H. J. Roseboom, C.E. Clark, and W. Fazor, "Application of a Technique for Research and Development Program Evaluation," Operations Research, 7:646-669, September 1959.

15. John E. Murray, "Consideration of PERT Assumptions," IEEE Transactions on Engineering Management, EM-10, September 1963.

16. PERT Fundamentals, Vol. I - Networking, U. S. Government Printing Office, Washington, D. C.

17. PERT Program Evaluation Research Task, Summary Report, Phase I, Special Projects Office, Bureau of Naval Weapons, Department of the Navy, Washington, D. C., July 1958.

18. A Procedure for Estimating Cost, Time, and Reliability in Development Training, Bird Engineering-Research Associates, Inc., Vienna, Virginia, 1963.

19. E. D. Stackfleth, The Reliability and Validity of Various Techniques of Estimating Task Times, Unpublished Doctoral Dissertation, Purdue University, 1965.

20. D. J. A. Welsh, "Errors Introduced by PERT Assumption," Operations Research, 13:141-143, 1965.

[illegible]. H. S. Woodgate, Planning by Network, Business Publications Limited, London, 1964, Chapters 5 and 6.

Scheduling and Resource Allocation

1. C. E. Clark, "The Optimum Allocation of Resources Among the Activities of a Network," Journal of Industrial Engineering, 12:11-17, January 1961.

2. R. W. Clarke, "Activity Costing - Key to Progress in Critical Path Analysis," IRE Transactions on Engineering Management, Em 7:132-136, March 1962.

3. D. L. Cook, PERT: Applications In Education, USOE Cooperative Research Monograph #17, U. S. Government Printing Office, Washington, D. C., 1966.

4. E. W. Davis, "Resource Allocation in Project Network Models - A Survey," Journal of Industrial Engineering, 17:177-188, April 1966.

5. S. Lambourn, "Resource Allocation and Multi-Project Scheduling - A New Tool in Planning and Control," The Computer Journal, 5:300-304, January 1963.

6. J. T. Moder and C. R. Phillips, Project Management with PERT and CPM, Reinhold Publishing Company, New York, 1964, Chapters 5 and 6.

7. PERT Fundamentals, Vol. II - Scheduling and Planning, PERT Orientation and Training Center, Washington, D. C. (n.d.).

8. PERT . . . Guide to Management Use, PERT Coordinating Group, Office of the Secretary of Defense, Washington, D. C.

9. R. S. Rosenbloom, "Notes on the Development of Network Models for Resource Allocation in R and D Projects," IRE Transactions on Engineering Management, EM-11, 58-63, June 1964.

10. J. D. Wiest, The Scheduling of Large Projects with Limited Resources, Office of Naval Research, Memo #113, Graduate School of Industrial Administration, Carnegie Institute of Technology, Pittsburgh, Pennsylvania, May 15, 1962.

11. H. S. Woodgate, "Planning Networks and Resource Allocation," Datamation, 14:36-43, January 1968.

12. H. S. Woodgate, Planning by Networks, Business Publications Ltd., London, England, 1964.

13. PROMIS Time Module, Reference Manual, Burroughs Corporation, Detroit, Michigan, June 1968.

Cost Estimation and Budgets

1. John S. Baumgartner, Project Management, Richard D. Irwin, Inc., Homewood, Illinois, 1963.

2. R. W. Clarke, "Activity Costing - Key to Progress in Critical Path Analysis," IRE Transactions on Engineering Management, September 1963, pages 132-136.

3. R. W. Clarke, "Nature of the Time-Cost Relationship," Graduate School of Business, Stanford University, California, October 1961.

4. Frank B. Dilley, "Program Budgeting in the University Setting," Educational Record, Fall 1966, pages 490-497.

5. F. C. Dykeman, Financial Reporting Systems and Techniques, Prentice Hall, Englewood Cliffs, New Jersey, 1969.

6. Robinson G. Hollister, Jr., "A Decision-Making Budget," Educational Record, Fall 1966, pages 490-497.

7. Robert W. Johnson, Financial Management, Allyn and Bacon, Inc., Boston, 1966.

8. PERT COST, System Design, DOD and NASA Guide, U. S. Government Printing Office, 1962, 0-646214, Washington 25, D. C.

9. Gordon Shillinglaw, Cost Accounting, Richard D. Irwin, Inc., Homewood, Illinois, 1967.

10. J. Vaizey and J. S. Chesswas, The Costing of Educational Plans, UNESCO International Institute for Educational Planning, 1967.

11. Raymond Villers, Research and Development, Planning and Control, Financial Executives Research Foundation, Inc., 50 West 44th Street, New York, 1964.

Operational Control Procedures

1. Robert N. Anthony, Planning and Control Systems: A Framework for Analysis, Division of Research, Graduate School of Business Administration, Harvard University, Boston, 1965.

2. John S. Baumgartner, Project Management, Richard D. Irwin, Inc., Homewood, Illinois, 1963.

3. Peter M. Blau and W. Richard Scott, Formal Organizations: A Comparative Approach, Chandler Publishing Company, San Francisco, 1962.

4. C. P. Bonini (Ed.), Management Controls: New Directions in Basic Research, McGraw-Hill Book Company, New York, 1964.

5. P. F. Drucker, The Effective Executive, Harper and Row, New York, 1967, Chapters 6 and 7.

6. F. C. Dykeman, Financial Reporting Systems and Techniques, Prentice Hall, Inc., Englewood Cliffs, N. J., 1969.

7. Louis Fried, "Executive Controls." Management Services, 5:17-26, May 1968.

8. W. F. Gamer, "Fitting Operations Control Reports to Management Needs," Management Services, 6:38-43, March 1969.

9. J. B. Gore, Briefing as a Method for Communicating Reports to Project Management, Unpublished Master's Thesis, The Ohio State University, 1969.

10. Robert V. Head, "Management Information Systems: A Critical Appraisal," Datamation, May 1967, pages 22-27.

11. C. H. Kepner and B. B. Tregoe, The Rational Manager, McGraw-Hill Book Company, New York, 1965.

12. Harold Koontz and Cyril O'Donnell, Management: Book of Readings, McGraw-Hill Book Company, 1964.

13. Harold Koontz and Cyril O'Donnell, Principles of Management, McGraw-Hill Book Company, New York, 1964.

14. Philip Kottler, Marketing Management, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1967.

15. B. C. Lemke and James D. Edwards, Administrative Control and Executive Action, Charles E. Merrill Books, Inc., Columbus, Ohio, 1961.

16. . Lindberg, "The Unfamiliar Art of Controlling" Management Services, 6:15-20, May 1969.

Operational Control Procedures

17. John F. McNeil, "Program Control Systems," IEEE Transactions on Engineering Management, Vol. EM-11, March 1964, pages 29-42.

18. PERT Cost Output Reports, Supplement No. 1 to DOD and NASA Guide, PERT Coordinating Group, March 1961.

19. P.P. Schoderbek, "Is PERT/COST Dead?," Management Services, 5:43-50, November 1968.

20. G. Thornley, Critical Path Analysis in Practice: Collected Papers on Project Control, Tavistock Press, London, 1968.

21. H. S. Woodgate, Planning by Network, Business Publications Limited, 180 Fleet Street, London, 1964.

Generalized Project Management Model

1. R. N. Anthony, Planning and Control Systems: A Framework for Analysis, Boston Division of Research, Graduate School of Business Administration, Harvard University, 1965.

2. Desmond L. Cook, A Generalized Project Management Model, Educational Program Management Center, College of Education, The Ohio State University, Columbus, Ohio 43210, November 1968.

3. Desmond L. Cook, "The Use of Systems Analysis and Management Systems in Project Planning and Evaluation," Socio-Economic Planning Sciences, 2:389-397, 1969.

Project Selection

1. Ernest Allen, "Why Are Research Grant Applications Disapproved?," Science, 132:1532-1534, November 1960.

2. N. R. Baker and W. H. Pound, "R and D Project Selection: Where We Stand," IEEE Transactions on Engineering Management, Vol. EM-11, December 1964, pages 124-134.

3. R. G. Brandenburg, "Project Selection in Industrial R and D: Problems and Decision Processes," Research Program Effectiveness, (M. Yovits, Ed.), 1966.

4. C. K. Bugli, "When to Terminate a Research and Development Project," Research Management, 10:275-284, July 1967.

5. R. H. Collcut and R. D. Reamer, "Choosing the Operational Research Program for B. I. S. R. A.," Operational Research Quarterly, 18:219-242.

6. B. V. Dean, Evaluating, Selecting and Controlling R and D Projects, Research Study 89, American Management Association, 1968.

7. F. Hartman and S. Moglewer, "Allocation of Resources to Research Proposals," Management Science, 14:85-110, September 1969.

8. David B. Hertz and Phillip G. Carlson, "Selection, Evaluation, and Control of Research and Development Projects," in Operations Research in Research and Development, (S. Dean, Ed.), John Wiley and Sons, New York, 1963

9. N. M. Kamrany, et. al., A Heuristic Investment Model for Nonprofit Research, Systems Development Corporation, Santa Monica, California, August 29, 1966.

10. C. M. Mottley and R. D. Newton, "The Selection of Projects for Industrial Research," Operations Research, 7:740-751, November 1959.

11. C.K.Robbins, A Management System for Exploratory Development, Air Force Flight Dynamics Laboratory, Wright-Patterson Air Force Base, Ohio (undated).

12. E. B. Roberts, "How the U. S. Buys Research," International Science and Technology, September 1964, pages 70-77.

13. H. H. Rosenberg and H. M. Bain, Jr., Program Planning for Research and Development in the Navy, Washington Research Office, Syracuse University, January 1964.

14. J. M. Rosenfeld and Mathew Smith, "R and D Planning in the Decentralized Organization," Research Management, 10:425-438, November 1967.

15. A. H. Rubenstein, A Real-Time Study of Information Requirements for Project Selection in Research and Development, The Technological Institute, Northwestern University, Evanston, Illinois, August 1966.

Project Selection

16. A. M. Rubenstein, "Studies of Project Selection Behavior," in Operations Research and Research and Development, M. W. Dean (Ed.), John Wiley and Sons, Inc., New York, 1963.

17. W. J. Sacco, On the Choice of Long Study Tests, Ballistic Research Laboratories, Aberdeen Proving Ground, Maryland, August 1965.

18. Gerald R. Smith, A Picture of Research as Reflected in Proposals Submitted to the Cooperative Research Program, U. S. Office of Education (undated mimeo).

19. R. Villers, Research and Development: Planning and Control, Financial Executives Research Foundation, New York, 1964, Chapter 4.

20. Allen Yorke, Jr., "How Foundations Evaluate Requests," Foundation News Bulletin of the Foundation Library Center, Volume 4, Number 4, July 1964, pages 1-4.

Organizing for and Implementing Management Systems

1. R. D. Archibald and R. L. Villoria, Network-Based Management Systems, Wiley and Sons, 1967, Chapters 8, 9, 10, 11, and 17.

2. I. Avots, "The Management Side of PERT," California Management Review, 4:16-27, 1962.

3. R. D. Boverie, "The Practicalities of PERT," IEEE Transactions on Engineering Management, 10:3-5, March 1963.

4. J. L. Burns, A Catalog of Computer Programs for PERT, Administrative Services Division, Westinghouse Electric Corporation, Baltimore, Maryland, December 1963.

5. R. Clayton and R. Glenn, "Analysts Look at PERT Through Eyes of the Scientist and the Engineer," Navy Management Review, October 1962, pages 12-14.

6. Desmond L. Cook, PERT: Applications in Education, Cooperative Research Monograph No. 17, U. S. Office of Education, 1966, Chapter 4.

7. D. H. Dillman, A Simulation Exercise for the Training of Educational Research and Development Program Managers, Unpublished Doctoral Dissertation, The Ohio State University, 1969.

8. D. H. Dillman and D. L. Cook, "Simulation in the Training of R and D Project Managers," Educational Technology, 9:39-43, May 1969.

9. M. R. Feinberg, "Fourteen Suggestions for Managing Scientific Creativity," Research Management Journal, September 1965, pages 190-210.

10. Marvin Flaks, et al., "Network Management Techniques," Factory, 122: 95-112, March 1964.

11. H. G. Francis, "Practical Advice for the Use of PERT," in G. N. Stillian et al., PERT: A New Management Planning and Control Technique, American Management Association, New York, 1962.

12. L. S. Hill, "Some Possible Pitfalls in the Design and Use of PERT Networking," Academy of Management Journals, June 1965, pages 139-145.

13. A. B. Kahn, "Skeletal Structure of PERT and CPA Computer Programs," Communications of the ACM, 6:473-479, August 1963.

14. J. J. Moder and C. R. Phillips, Project Management with PERT and CPM, Reinhold Publishing Corporation, 1964, Chapters 10 and 11.

15. D. Olsen, "Caution: One Company's Mistakes," Factory, 122:95-112, March 1964.

16. C. R. Phillips, "Fifteen Key Features of Computer Programs for PERT and CPM," Industrial Engineering, 15:14-20, January 1964.

17. C. R. Phillips and C. R. Beer, Computer Programs for PERT and CPM, Technical Paper No. 13, Operations Research Inc., Silver Springs, Maryland, October 1963.

18. P. F. Schoderbek, "A Study of the Applications of PERT," Academy of Management Journal, September 1965, pages 190-210.

19. P. F. Schoderbek, "The Sociological Problems of PERT," in P. F. Schoderbek (Ed.), Management Systems: A Book of Readings, J. Wiley and Sons, 1967.

20. G. N. Stilian, "An Evaluation of PERT," In G. N. Stilian et al., PERT: A New Management Planning and Control Technique, American Management Association, New York, 1962.

21. G. N. Stilian, et al., PERT: A New Management Planning and Control Technique, American Management Association, New York, 1962.

22. USAF-PERT, Volume V, Implementation Manual, HQ AESC (SCCS), Andrews Air Force Base, Washington, D. C.

23. H. S. Woodgate, Planning by Network, Business Publications, Ltd, London, 1964, Chapters 13 and 14.

ABSTRACT

A rather recent facet in curriculum construction theory is the development of curricula via a behavioral objective learning hierarchy viewpoint. It is stated in the research that curricula constructed within the learning hierarchy domain are meritorious from pedagogical, as well as cognitive and affective, dimensions. But conspicuously absent from the literature is a set of numerical procedures needed to test the validity of a curriculum constructed as a hierarchical learning sequence. There is also a dearth of numerical procedures needed to deal with questions concerned with the comparisons of hierarchical learning structures. Therefore, the purpose of this article is to discuss numerical considerations dealing with the validation and comparison of curricula developed as behaviorally stated learning hierarchies.

LEARNING HIERARCHIES--NUMERICAL CONSIDERATIONS

Theodore A. Eisenberg

The development of curricula via a behavioral objective learning hierarchy viewpoint is a rather recent facet in curriculum construction theory. Numerous articles have been written describing the pedagogical and philosophical dimensions associated with the specification of expected behavioral performances as a result of instruction (Gagné, 1965; Shulman, 1968; Walbesser, 1966). The empirical research of Carter (1969), Gagné (1967), and Smith (1970) imply that the sequencing of behavioral objectives into a learning hierarchy seems to be a wise developmental tactic for curriculum construction. But, incorporation in the literature of numerical procedures to test researchable hypotheses in this area is lacking. Hence, it is the intent of this article to discuss numerical considerations dealing with the validation and comparison of behaviorally stated learning hierarchies.

Background

The construction of a learning hierarchy commences with the specification of a behavior a student should be capable of performing as a result of instruction. This terminal behavior becomes the apex of what eventually will be a pyramid of prerequisite behaviors. The curriculum developer then asks: What behavior must one exhibit before he can perform the terminal behavior? By answering this question he has identified a terminal behavior and several 1st-order subordinate behaviors. For example, suppose that in order to perform an identified terminal behavior, one must first be able to perform subordinate behaviors a and b. The pyramid begins as shown in Figure 1.

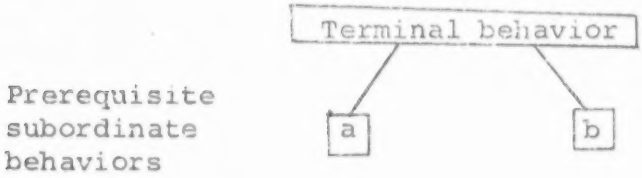


Figure 1

Identification of 1st-level Subordinate Behaviors

To each subordinate behavior the question is repeated: What behaviors must one exhibit before he can perform this subordinate

behavior? Suppose that in order to perform behavior a, one must first be able to perform behaviors c, d, and e, and for behavior b, one must be able to perform behaviors f, g, and h. Hence, 2nd-level subordinate behaviors have been identified and the hierarchy develops as in Figure 2.

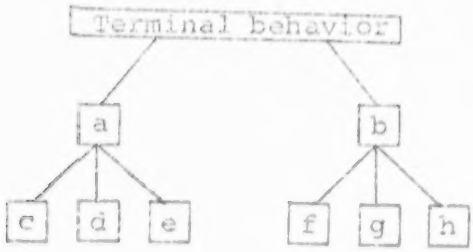


Figure 2

Identification of 2nd-level
Subordinate Behaviors

The procedure is iterated until all the identified prerequisite subordinate behaviors are without instruction capabilities of the learner.

Gagné (1965), Lindvall (1964), Mager (1962), Tyler (1950), Walbesser (1968), and others have espoused the developmental and procedural considerations for the construction of curricula in the aforementioned manner.

Content Validity

Once the curriculum has been constructed an obvious question to ask is: Does the curriculum achieve its objectives? That is, after instruction can the student perform the behaviors stated in the cells of the learning hierarchy? In an effort to answer this question a competency measure is constructed.

Each cell in the hierarchy is translated into a set of problems or questions which the authors of the developmental sequence consider reasonable for assessing the acquisition or nonacquisition of the stated behavior. If, after instruction, the student can perform the representative problems for a given cell, then the behavior in that cell has been realized. But it is extremely important that the competency measure, used to ascertain the acquisition of the behaviors in the cells of the hierarchy, possesses content validity.

Content validity of the competency measure for a learning hierarchy is determined in the usual manner. Given the list of behaviorally stated objectives and the list of tasks supposedly based upon the objectives, can a group of "experts" match the tasks with the corresponding behaviors? Usually included within the representative set of tasks are

questions related to no cell in the learning hierarchy and questions representative of more than one cell in the hierarchy. Adoption of such a tactic enables one to achieve a more accurate assessment of the content validity of the competency measure rather than by having a 1-1 correspondence between behaviors and representative tasks. Hence, it can be assumed that a competency measure possesses content validity if there exists a minimum of a 0.90 correlation in the matching of <u>each</u> behaviorally stated objective and the tasks used to test the acquisition of the objective.

Walbesser Validation Procedure

Walbesser (1969) has developed a numerical procedure for testing a hypothesis of "task dependency" in a learning hierarchy. His procedure provides a numerical criterion for determining the validity of a hierarchicaly organized learning sequence.

Consider the following schematic representation of a learning hierarchy as represented in Figure 3.

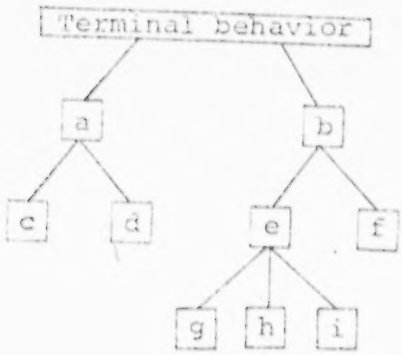


Figure 3

Schematic Representation of
a Learning Hierarchy

A "terminal behavior" and its immediate subordinate behaviors constitute a hypothesis of task dependency within the hierarchy. Figure 4 represents the four hypotheses of the structure in Figure 3.

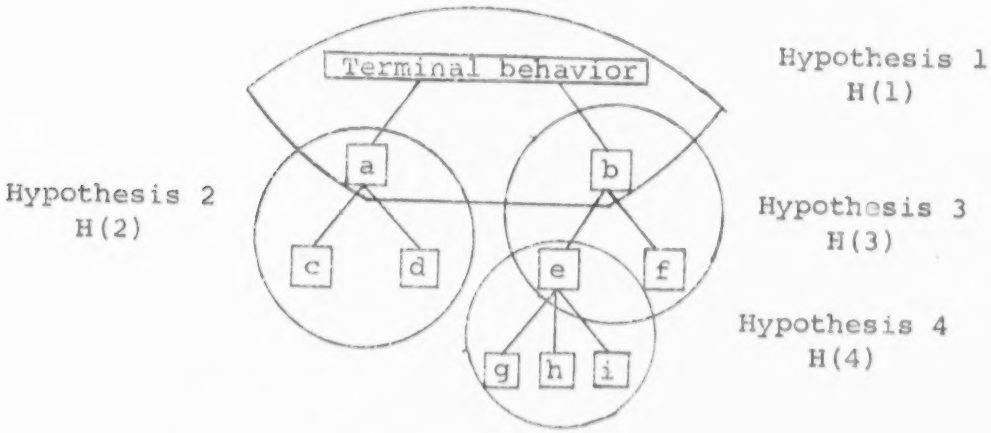
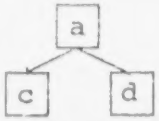


Figure 4

Representation of the Four Hypotheses
of the Structure in Figure 3

In other words, it is hypothesized that in order to perform the behavior required in cell a, one must first be able to perform the behaviors in cells c and d. Similarly, in order to perform the behavior in cell e, one must first be able to perform the behaviors specified in cells g, h, and i.

In Figure 4, consider the hypothesis of task dependency that the behaviors in cells c and d are prerequisite for performance of the behavior in cell a. We are considering the following hypothesis:

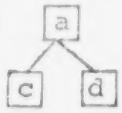


Suppose that the behavior in each cell has been translated into a set of valid tasks that can be used to assess the acquisition or nonacquisition of the given behavior. After instruction, the competency measure is administered and scored on a binary scale: 1 if in the judgment of the instructor the student has mastered the behavior in the cell, 0 if the student has not mastered the behavior. The possible outcomes of such a consideration are listed in Table 1.

0^0_0	0^0_1	1^0_0	1^0_1	0^1_0	0^1_1	1^1_0	1^1_1

Table 1

Possible Outcomes Using a Binary Scale to Represent the Acquisition of the Behaviors in the Hypothesis



The 1^0_1 configuration implies that the student, after instruction, could perform the subordinate behavior in cell c and cell d, but could not perform the "terminal" behavior in cell a. Similar interpretations could be given for the other seven configurations.

Each configuration in Table 1 can be considered as an ordered pair of digits. The first element in the ordered pair is associated with the acquisition or nonacquisition of the terminal behavior in the hypotheses. The second element in the ordered pair is associated with the acquisition or nonacquisition of the totality of all hypothesized prerequisite subordinate behaviors. If the student has acquired the terminal behavior and all hypothesized subordinate behaviors, then the ordered pair associated with that hypothesis of task dependency is (1,1). However, if the student has acquired the terminal behavior of the hypothesis

but not <u>all</u> subordinate behaviors, then the ordered pair associated with the hypothesis is (1,0). The ordered pairs associated with the configurations in Table 1 are listed in Table 2.

0^0_0	0^0_1	1^0_0	1^0_1	0^1_0	0^1_1	1^1_0	1^1_1

Table 2

Ordered Pairs Associated with
Configurations in Table 1

The (0,0) ordered pair implies that the student did not, according to his performance on the competency measure, acquire the terminal behavior of the hypothesis and did not acquire <u>all</u> subordinate behaviors. A (0,1) ordered pair implies that the student did not acquire the terminal behavior, but did acquire all hypothesized subordinate behaviors. Similar interpretations can be given to the (1,0) and (1,1) ordered pairs. Using this tactic, Walbesser states several implications of "task dependency" from a numerical viewpoint.

1. <u>Consistency Ratio</u>. If after instruction the student has acquired the terminal behavior of the hypothesis, then he should also have acquired all subordinate

behaviors. Quantitatively, the consistency implication of a hypothesis of a hierarchy is defined to be the ratio of the frequency of the (1,1) ordered pair for the hypothesis divided by the sum of the frequencies of the (1,1) and (1,0) ordered pairs for the hypothesis. This ratio ranges from 0 to 1 provided that the frequencies of the (1,1) and (1,0) ordered pairs are not both zero. (In that case, the ratio is not applicable since we would be dividing by zero.) Symbolically, one is testing the implication that acquisition of the terminal behavior implies acquisition of all subordinate behaviors.

$$T \Longrightarrow \forall_{Sb} \qquad \frac{f(1,1)}{f(1,1) + f(1,0)}$$

2. <u>Adequacy Ratio</u>. If the student has acquired all subordinate behaviors, then with appropriate instruction he should be capable of performing the terminal behavior of the hypothesis. Numerically the adequacy of a hypothesis in a learning hierarchy is defined to be the ratio of the frequency of the (1,1) ordered pair for that hypothesis divided by the sum of the frequencies of the (1,1) and (0,1)

ordered pairs for the hypothesis. This ratio also ranges from 0 to 1 provided that the set of (0,1) and (1,1) responses is not empty. Symbolically, the adequacy hypothesis tests the implication that acquisition of all subordinate behaviors implies, with instruction, acquisition of the terminal behavior.

$$\forall Sb \overset{\text{(Instr.)}}{\Longrightarrow} T \qquad \frac{f(1,1)}{f(1,1) + f(0,1)}$$

3. <u>Inverse Consistency Ratio</u>. The inverse consistency ratio tests the implication that nonacquisition of the terminal behavior implies nonacquisition of all subordinate behaviors. Hence, it is defined to be the ratio of the frequency of the (0,0) ordered pair for the hypothesis divided by the sum of the frequencies of the (0,0) and (0,1) ordered pairs for the hypothesis. Provided that the set of responses for the (0,0) and (0,1) ordered pairs is nonempty, this ratio also ranges from 0 to 1. Symbolically, it tests the following implication.

$$\sim T \Longrightarrow \sim \forall Sb \qquad \frac{f(0,0)}{f(0,0) + f(0,1)}$$

4. Inverse Adequacy Ratio. The inverse adequacy ratio tests the implication that nonacquisition of all subordinate behaviors implies, even with mediating instruction, nonacquisition of the terminal behavior. Inverse adequacy is defined to be the ratio of the frequency of the (0,0) ordered pair for the hypothesis divided by the sum of the frequencies of the (0,0) and (1,0) ordered pairs for the hypothesis. Provided that the frequencies for (0,0) and (1,0) ordered pairs are not both zero, this ratio ranges from 0 to 1. Symbolically, the implication being tested can be represented as follows:

$$\sim \forall Sb \overset{\text{(Instr.)}}{\Longrightarrow} \sim T \qquad \frac{f(0,0)}{f(0,0) + f(1,0)}$$

5. Completeness Ratio. In an effort to determine the strength of a hypothesis of task dependency a completeness ratio is defined. The completeness ratio for a hypothesis of task dependency in the hierarchy is defined to be the ratio of the frequency of the (1,1) ordered pair for the hypothesis divided by the sum of the frequencies of the (1,1) and (0,0) ordered pairs for the hypothesis: $\frac{f(1,1)}{f(1,1) + f(0,0)}$

This ratio estimates the percentage of individuals capable of traversing the hypothesis as opposed to those incapable of performing at least one of the subordinate cells in the hypothesis. The implications of such a ratio are discussed below.

Hence, an adequacy ratio, completeness ratio, inverse adequacy ratio, inverse completeness ratio, and a completeness ratio can be associated with each hypothesis in the learning hierarchy. A learning hierarchy is considered valid if, and only if, an adequacy, consistency, and completeness ratio of at least 0.85 is obtained for each hypothesis in the learning sequence (Walbesser, 1969).

Implications

In Table 3 consider the following frequency distribution for a hypothesis of a hypothetical learning hierarchy.

Outcome: x	Frequency of # of Students Obtaining Outcome: f(x)
(0,0)	50
(0,1)	0
(1,0)	0
(1,1)	50

Table 3

Frequency Distribution for an Incomplete Hypothesis of a Hypothetical Learning Hierarchy

The ratios for the task dependency hypothesis are computed as follows:

$$R_1 \text{ (consistency)} = \frac{50}{50+0} = 1.00$$

$$R_2 \text{ (adequacy)} = \frac{50}{0+50} = 1.00$$

$$R_3 \text{ (inverse consistency)} = \frac{50}{50+0} = 1.00$$

$$R_4 \text{ (inverse adequacy)} = \frac{50}{0+50} = 1.00$$

$$R_5 \text{ (completeness)} = \frac{50}{100} = .50$$

Even though the consistency and adequacy ratios are 1.00, the data suggest that 50% of the population could not perform any of the behaviors required in the hypothesis of task dependency. Hence, to the curriculum developer, this suggests that the hierarchy should be extended further, to build upon the behaviors the students do possess. Based upon the data, one can not reject the hypothesis of task dependency, for if an individual could perform the subordinate behaviors, with instruction, he can successfully perform the terminal behavior in the hypothesis. But psychologically a learning hierarchy that is applicable to only 50% of the population that will use it leaves something to be desired. Hence, even though acquisition of the

subordinate behaviors implies acquisition of the terminal behavior, one rejects the hypothesis as being valid for the entire population.

If a hypothesis is consistent but not adequate this implies that possibly there is too great of a jump between the subordinate behaviors and the terminal behavior of the hypothesis. In other words, a consistent but inadequate hypothesis implies mediating cells need to be added. The frequency distribution given in Table 4 depicts a hypothesis that is consistent but not adequate.

x	f(x)
(0,0)	0
(0,1)	(50)
(1,0)	0
(1,1)	(50)

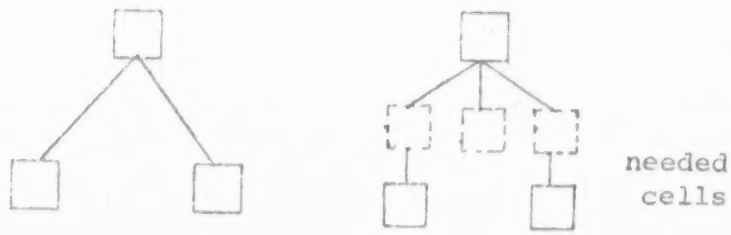


Table 4

Frequency Distribution and Schematic Representation
of an Inadequate but Consistent Hypothesis
of a Hypothetical Learning Hierarchy

If a hypothesis is adequate but not consistent, then one should re-examine the subordinate cells to ascertain whether

or not they are really necessary for acquisition of the behavior in the terminal cell of the hypothesis.

The adequacy ratio and inverse consistency ratio are not logically equivalent, for the adequacy ratio implies the use of mediating instruction. Moreover, it can be argued that the inverse consistency and inverse adequacy ratios are useful from a pedagogical viewpoint, since these ratios help pinpoint trouble areas within the students' learning sequence. It should also be noted that a hypothesis of task dependency can not be inadequate and inconsistent simultaneously.

The applicability of the Walbesser procedures are manifested within the pedagogical uses of the hierarchy as well as in the determination of the validity of the learning sequence. But what questions does one ask concerning two <u>valid</u> learning hierarchies, each designed to achieve the same terminal behavior?

Magnitude of Hierarchy

If there exist two equally valid learning hierarchies each designed to achieve the same terminal behavior, an obvious consideration would be one of time efficacy. Which hierarchy can be traversed in the least amount of time?

Although it is almost axiomatic to state that each individual traverses a hierarchy with different time rates, an "average traversing time" for the population with which the hierarchy was validated could be associated with the learning sequence. But the generalizability of such a factor is low without a specific description of the population with which the hierarchy was validated. Hence, it seems reasonable to consider the complexity of the structure itself.

For each hypothesis of task dependency, the number of subordinate behaviors may be considered the "complexity of the hypothesis"; with reference to the hierarchy in Figure 4, the complexity of hypothesis H(3) is two. Let N equal the number of hypotheses in the learning structure. Therefore, for any learning hierarchy, a complexity coefficient, designated cc, can be computed.

$$\text{complexity coefficient} = cc = \frac{\sum_{i=1}^{N} \text{complexity of hypothesis}(i)}{N}$$

The complexity coefficient denotes an average number of subordinate behaviors for each hypothesis in the hierarchy.

Another consideration of the structure of a learning sequence is the number of subordinate levels--that is, the length "l" of the hierarchy. The length of the hierarchy in Figure 4 is three. In summary with reference to Figure 4:

$$N = 4$$

$$cc = \frac{2+2+2+3}{4} = 2.25$$

$$l = 3$$

Hence, it is possible to associate with each learning hierarchy a vector in which the first component of the vector is N, the second component is cc, and the third component is l. A learning hierarchy that is associated with the vector (N_1, cc_1, l_1) is then said to be of "higher magnitude" than a learning hierarchy associated with the vector (N_2, cc_2, l_2) if two of the following are strict inequalities:

$N_1 \geq N_2$, $cc_1 \geq cc_2$, or $l_1 \geq l_2$.

By associating such a vector with each learning hierarchy one at least has an idea of the relative complexity and magnitude of the structure. It then seems reasonable to assume that even though the two hierarchies may be equally valid, the one of lesser magnitude is the more desirable.

Cell Cruciality

Since valid hierarchies of relatively low magnitude seem desirable, one can address himself to the question of decreasing the magnitude of a valid learning hierarchy. (However, note that it is more desirable to have a valid structure of high magnitude rather than one that is invalid but efficacious in the sense of being of low magnitude.) One can decrease the magnitude of a hierarchy by testing the

cruciality of the hypothesized subordinate cells. Let Figure 5 depict a valid hypothesis of a hypothetical learning hierarchy.

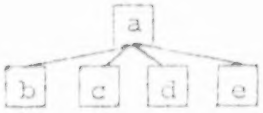


Figure 5

An Alleged Valid Hypothesis of a Hypothetical Learning Hierarchy

Are each of the subordinate behaviors in the hypothesis crucial for acquisition of the terminal behavior in the hypothesis? The tactic used in testing the independence of a set of postulates in an axiomatic system is applicable. For example, traverse the hypothesis giving special attention to withhold instruction in cell d, then administer the competency measure. If the hypothesis is equally valid without instruction for cell d, then it can be assumed that the behavior in cell d is not crucial for acquisition of the terminal behavior of the hypothesis. Hence, cell d should be removed from the structure. In so doing the validity of the hypothesis is not changed but the magnitude of the structure itself is reduced. The procedure is then iterated for the other hypothesized subordinate behaviors.

Conclusion

The structures of learning hierarchies are embedded within graph and lattice theory. Birkoff (1948) has stated that any organizational chart is essentially a partially ordered set, and the mathematics dealing with such structures is truly amazing (Lieber, 1959). However, the intent of this article was to consider numerical procedures which one can effectively use to determine the validity of curricula developed as a hierarchical learning sequence. Hopefully, the utility of the results from lattice theory will be incorporated into learning hierarchy research.

Questions related to the effect of hierarchical learning sequences on attitudes, problem solving, achievement, retention, and transfer are being asked. The numerical considerations discussed in this article will hopefully help researchers in this area of curriculum construction.

References

Birkhoff, G. Lattice theory. American Mathematical Society Colloquy Publications, 1948, 25.

Carter, H. L. A study of the ability of primary school children to generalize behavioral competencies acquired in science to other content settings. Unpublished doctoral dissertation, University of Maryland, College Park, 1969.

Gagné, R. M. The conditions of learning. New York: Holt, Rinehart & Winston, 1965.

Gagné, R. M. The acquisition of knowledge. Research in mathematics education. Washington, D.C.: National Council of Teachers of Mathematics, 1967.

Lieber, L. R. Lattice theory. Brooklyn: Galois Institute of Mathematics and Art, 1959.

Lindvall, C. M. (ed.). Defining educational objectives. Pittsburgh: University of Pittsburgh Press, 1964.

Mager, R. F. Preparing instructional objectives. Palo Alto: Fearon Publishers, 1962.

Shulman, L. S. Psychological controversies in the teaching of science and mathematics. The Science Teacher, 1968, 35(6), 34-90.

Smith, J. M. Relations among behavioral objectives, rate of acquisition and retention. Unpublished doctoral dissertation, University of Maryland, College Park, 1970.

Tyler, R. W. Basic principles of curriculum and instruction. Chicago: University of Chicago Press, 1950.

Walbesser, H. H. Science curriculum evaluation: Observations on a position. The Science Teacher, 1966, 33(2), 34-38.

Walbesser, H. H. An evaluation model and its application. Washington, D.C.: American Association for the Advancement of Science, 1968.

Walbesser, H. H. and staff of University of Maryland Mathematics Project. Multi-jurisdictional behaviorally-based inservice program for elementary school teachers in mathematics. USDE/DHEW Final Report. College Park: University of Maryland Mathematics Project, 1969. (Mimeo.)

To be distributed
August [illegible], 1970

A General Classification of Research Types

Asher

1. A TRUE EXPERIMENT

researcher has the power to assign subjects (S's) to groups and to assign various experimental conditions to these groups. Hopefully this is done at random. The most powerful explanatory method in the behavioral and social sciences. The logic of a true experiment - equal groups, unequal treatments, unequal results.

2. Quasi-EXPERIMENTS

Randomization not possible, but the researcher can show that the logic of the experiment holds reasonably well.

A. Intact groups are essentially equivalent

B. Intact groups can be shown not to be different on important variables.

C. Intact groups ~~[illegible]~~ have known differences which can be taken into account in the interpretation of the results of the research.

3. Theoretical-Descriptive

Usually no experimental treatments are given or occurred. These studies usually describe groups of subjects by using a number of tests, questionnaires, interviews, observations, inventories, etc. Good results hinge on good theory developed from the literature and a good knowledge of measurement theory in the behavioral sciences.

4. SURVEY-SAMPLE

Usually a few observations or tests, questions, etc. are given to carefully selected subjects. The key to good work here is efficiency. Pre-testing of instruments, careful definition of the population(s), and careful calculation of sample sizes, confidence limits for results, and consideration of various types and combinations of sampling plans.

This type research can be the most immediately useful in day-to-day decision making by school administrators.

Assignment and Objectives

Heisey and Asher

Objectives: This week will be used to synthesize and put into operation the learning and skills developed during the past five to six weeks.

Assignment: Due Friday morning, October 1, 1970

To write a research and/or evaluation proposal which will be of benefit to your educational system (district, school, college, etc.) It should include the following sections.

I Review of literature

Statement of Problem

Presentation of questions to be answered or hypotheses to be tested

Presentation of Methods and Procedures

Suggestion of Possible Results and Benefits

II Plan for Administrative Respondibilities

Prepare Budget

Prepare Logistics

Set Forth Schedule of Events (operationally defined)

Plans for Dissemination and Implementation of Results

This task and our instruction for the week will meet these objectives of the Institute:

4. d

5. a, b, c

7. a, b, c, d

Our plan is to lecture and converse with you as a group in the morning and work with you in small groups and individually

in the afternoons. Use us as a sounding board to bounce your ideas and thinking off of. We will give you feedback for your proposals.

To be distributed
Aug. 10, 1970

Sources of Educational Literature

Asher

I. Short summaries and Abstracts

1. Educational Resources Information Centers - ERIC

USOE sponsored

Two major sources: 1. Unpublished papers

2. Published articles, books, etc.

2. Education Index - an abstracting service

Yearly and ~~Monthly~~ Monthly - a journal

3. Other Abstracts in Related Areas

A. Psychological Abstracts - a journal

B. Child Development Abstracts

C. Sociological Abstracts

4. Recent articles in journal in area

II. Longer Summaries and Overviews of State of Knowledge

1. Encyclopedia of Educational Research published every ten years or so. Highly authoritative. Good index (in enter pages).

2. Handbook of Research on Teaching

Good resource for methodology - measurement, statistics, research methods; as well as reviews of research by substantive teaching areas.

3. National Society for the Study of Education (NSSE) Yearbooks.

One or two per year. Over a period of twenty years or so almost every major topic of interest to education is covered at book length. Verg good for the big picture. It may be somewhat dated if it is very old.

4. The Mental Measurements Yearbooks

Published about every three to five years by O.K. Buros.

Also, TESTS IN PRINT.

You can work backwards. Find the tests and measurements used in assessing the area of your interest. Look them up in these books and find the research relating to them by using the references sections.

5. Review of Educational Research. A journal of summaries and critiques of research articles appearing in journals, reports, books, etc. By TOPICS in the past with a complete cycle every three years. Up to date. Excellent source.

ROBERT L. SPAULDING
Durham Education Improvement Program
Duke University, Durham, North Carolina

Personalized Education in Southside School

The concept of *individualized instruction* covers a wide range of efforts to tailor the educational program of the schools to the individual learner —to his achievement and his rate of development (1). The literature on child and adolescent development shows that normal growth and development occur at various rates from year to year and vary considerably from child to child. Educational programs based on statistically derived

patterns of average growth and development are bound to be out of step with the developmental and growth needs of most of the individuals in any given group of children. Longitudinal studies have shown that a great many different patterns of development regularly occur among children. Some of these differences are influenced by genetic or constitutional factors, while others are governed by environmental settings and contingencies. Children from different cultural backgrounds are socialized and acculturated in various ways and respond in different ways to the school culture. In the area of cognition, each child brings to the classroom a private history of past experience that shapes his current patterns of thinking and learning. The intricacies of individualized patterns of growth and response to the school environment make it impossible for any teacher to plan and prescribe a program of instruction that would be completely appropriate to the individual educational needs of each child in her class.

Even though it may never be possible for a teacher to plan and prescribe a school program that would allow for maximal learning by each child in her class, many teachers have found it feasible to move away from a uniform instructional program, to which all children must adjust, to a curriculum that takes some account of the various rates of development and levels of achievement in their classes.

These attempts by teachers to meet the individual needs of children have taken many forms, and new administrative instructional arrangements are continually being invented. Among the most well known have been ability grouping, interest grouping, achievement grouping, individual contracts, tutoring, emergent curriculums, unit teaching, project or activity programs, and programmed instruction.

Each of these arrangements has been tried out with enthusiasm at one time or another as a possible solution to the perennial problem of individualized education. However, the history of educational innovation has shown that no one arrangement has yet completely succeeded in meeting all the individual needs of the diversity of children in the public schools.

Diagnosis and prescription

One basic problem underlies all the efforts of teachers and administrators to modify the current educational programs of the public schools to meet the needs of individual children. That is the problem of adequate diagnosis of needs at each point in the educational development of an individual child. A closely associated problem is the problem of treatment. Not only must diagnosis be accurate, but treatments appropriate to each of the learning problems presented by children must be worked out and tested so that a teacher can know which procedure to use once she has recognized

the difficulty a child may be having. Those who have watched the field testing of Individually Prescribed Instruction developed by Robert Glasser, Joseph Lipson, and others, of the Pittsburgh Research and Development Center, are aware of the tremendous complexities involved in diagnosing individual cognitive performance in a structured area such as mathematics or language and in prescribing appropriate educational encounters for individual learners.

Even if accurate diagnosis and appropriate assignment of learning experiences are possible in highly structured fields such as mathematics, language, or science, there still remain problems in working out school management systems that will use programmed materials keyed to diagnostic or evaluative measures. Without seeking to convey the idea that efforts for diagnosis and prescription of appropriate learning experiences should in any way be curtailed, I feel that alternative approaches should be pursued. They may prove to be more fruitful and less expensive.

Underlying the development of most continuous progress plans, as well as the Individually Prescribed Instruction system, is the assumption that the teacher or a teacher's aide or some other representative of the school will remain in a dependent relationship to the authorities of the school who administer the diagnostic and prescriptive procedures.

The concept of teacher control over the selection and the sequencing of the curriculum presented in the schools is inherent in most programs of individualized instruction. The reluctance of school authorities to share control over the educational experiences that are provided students underlies much of the current unrest among students in our schools and colleges. As long as school authorities insist on maintaining direct control and refuse to share in the process of diagnosis and selection of appropriate learning experiences, individual students will be frustrated by the instruction presented them. What is relevant cognitively to one learner is irrelevant to another; and no teacher, however well trained and however experienced, will ever be able to anticipate how any particular program of experiences provided by the school will transform the thinking of each individual learner. The demand by students to share in the decision-making process in the educational enterprise stems mainly from the frustration they experience as they are required to participate in meaningless, trivial, or redundant curriculum offerings.

Participation

Any innovation that purports to meet the needs of individual students in American education today must take into account the increasing demand by students that their educational experiences be relevant. To assure relevance, all teachers must be past masters at accurate diagnosis of individual levels of achievement, rates

of development, cultural backgrounds and personal patterns of cognitive development. Teachers must also be aware of educational alternatives so that the choices they make will be eminently appropriate for individual learners. That any such state of affairs will ever be possible in American education is quite unlikely. What, then, can school administrators and teachers do to meet the demand for educational relevancy?

Students themselves have provided a clue. Their argument in a word is "participation." If one listens to students these days, their argument boils down to the assertion that only the learner himself can experience the relevancy of his own environmental encounters. If one grants that the students' assertion is valid, what is the role of the school? How much should students share in decision-making about curriculum experiences? Within what limits and with regard to what goals should decision-making by students be permitted? How might school organizations be restructured to permit greater freedom, responsibility, and decision-making by students?

The answers to these questions are not readily available, and only after experimentation with new systems of educational organization and instructional programming will tentative answers be found. The evidence is clear that answers are needed. Students demand more freedom, want more responsibility, and insist on their right to participate in decision-making that affects their educational opportunities, occupations, careers, and sense of well-being.

An experiment

A program of individualized instruction that permits continuous progress with increasing degrees of freedom, responsibility, and decision-making is underway at the Southside School in Durham, North Carolina as part of a five-year experimental program for disadvantaged children. The program at the Southside School in Durham is part of the Durham Education Improvement Program, a Ford Foundation funded study of the developmental patterns of about two hundred children growing up in low-income settings (2). The study is examining the effects of various types of educational intervention.

One intervention at the Southside School is called *Personalized Educational Programming*. It is designed to personalize the educational program to the extent that each child participates in decision-making concerning his daily educational program with increasing degrees of freedom and responsibility.

The Personalized Educational Programming experiment at Southside School is based on educational concepts developed during the 1920's and the 1930's by Carleton Washburne in Winnetka, Illinois and Helen Parkhurst in Dalton, Massachusetts. The Dalton School in New York City continues to operate under the Dalton Plan. In both the Winnetka and the

Dalton plans, students were expected to undertake assignments or contracts, and work at them at their own rates for as long as necessary to complete them within an allotted or contractual period. Individual learners were given increasing responsibility as they demonstrated the ability to complete contracts on time or to meet deadlines for specific assignments.

In the Dalton Plan, as operated in New Cork City during the 1950's, students were given monthly assignments that were uniform for a specific grade level. Since the Dalton School enrolled children from high-income families, uniform assignments based on grade-level standards were given. Where individual differences in pupil ability made it unlikely that a particular child would be successful in completing an assignment, teachers were given the authority to lower their expectations and modify the assignments for that child so that he could continue to participate with the class as a whole. However, most parents found the slowly developing pupils needed to be tutored (out of school) to keep them from falling behind the school's achievement standards.

In a series of adaptations of the basic Dalton Plan tried out by the author in a number of public schools at the third-, fourth-, seventh-, and eighth-grade levels, it was found that the uniform assignment system was inappropriate for most public school situations. A modified Dalton Plan was worked out at the Hopland Elementary School in Hopland, California. Under the plan, students participated in choosing activities and tasks appropriate to individual levels of achievement and areas of interest. In the Hopland program the contractual idea, taken from Carleton Washburne's work, was incorporated into the basic Dalton Plan. The Hopland Plan proved feasible in an ungraded seventh- and eighth-grade combination class of thirty children in which the level of achievement varied from Grade 2 through Grade 13. The pupils in the Hopland class were from unemployed families on an Indian reservation, from farm families, and from business and professional families in the community. The Hopland program was designed to be conducted in a self-contained classroom by one teacher, but it provided the basic rationale and the structure of Personalized Education Programming at Southside School, which enrolled about sixty children aged six, seven, and eight.

The Southside Plan

The sixty boys and girls were grouped into four family groups or "prides," which met from 8:30 a.m. to 9:00 a.m. for planning and met again from time to time during the day as a group whenever a group activity, such as a field trip or a physical education activity, warranted their association as a total group. A pride was made up of children from each of the three age groups represented in the primary school and was carefully composed to form a heterogeneous

group. The children in each pride were chosen on the basis of academic achievement, rate of learning, sex, race, and degree of socialization. In the first year of the pilot program two prides were composed of non-readers, and two prides were composed of children who had some skill in reading. This accommodation to ability grouping was made as a transitional step to the current year, when each pride has representatives from the full range of abilities.

The Southside Personalized Educational Program begins at 8:30 a.m. with each of the children going to his pride. From 8:30 until 9:00, each child plans his daily schedule with the assistance of his pride teacher or a teacher's aide. To complete his plan for the day, the child examines several posted schedules and pays attention to specific requirements or constraints. Each day the pride teacher lists on a conference schedule the conferences that each child is expected to attend during the day. Some of these she will conduct; others will be the responsibility of other teachers in the school, but each child is expected to examine the conference schedule and put down on his daily plan opposite the appropriate time the location and the subject of the conference. Once he has examined the conference schedule and placed the conferences on his daily plan, he is ready to begin to plan his open laboratory time. Constraints on his freedom are listed on the wall, on a chart rack, or at the bottom of his daily plan sheet. In general, these constraints impose on him the requirement that he spend at least a half hour each on mathematics, reading, writing, and spelling practice and an additional half hour in a project activity in either social studies, art, music, or science. Some of the scheduled conferences will satisfy requirements in one or another of these academic areas. If so, the child may omit that area from his planning. When he has completed his daily plan, all the activities on the required list are to be included somewhere in his plan.

Guidelines

Lists of possible ways in which a child may satisfy time requirements in mathematics, reading, writing, or spelling practice are posted. Suggested projects in social studies, art, music, and science are also listed, but a child may derive his own projects from social studies or science units that teachers introduced to him during group conferences in social studies or science. In fact, teachers encourage pupils to pick individual projects that will complement the unit of group study in social studies or science.

Work stations and traffic control

In completing a daily plan each child examines the "work station schedule." This schedule lists the times that each classroom or laboratory is open and the number of children permitted to sign up for each of the stations at any given hour. In designing his daily schedule, the pupil picks a work station for each period

during the day and inserts his name opposite the work station, provided that the maximum number allowed at the station has not been reached. He continues to pick activities and work stations, placing them on his daily plan sheet until he has filled in all the open time slots. He will, of course, include time for going to lunch, physical education, and other routine activities he is expected to take part in.

When a pupil completes his daily plan, he presents it to his pride teacher or a teacher aide for approval. The signature of either one indicates that the plan has been approved. After the plan is cleared, the pupil begins his activities for the day. Throughout the day he is expected to have his daily plan sheet with him. All the teachers in the program are encouraged to examine the daily plans of any child who comes to a work station and to place on the plans a symbol, such as a star or a set of initials, to indicate to the child and to the pride teacher that the pupil has arrived at a particular station on schedule. Similar symbols are placed on the daily plans to indicate display of appropriate study habits, work underway at the proper time, or completed on schedule. Positive comments for quality work, creative ideas, or products, or developing skills are also entered on the plan sheets.

Allowances for differences

Since decision-making and planning are complex processes that must be learned, children are given small degrees of freedom at the beginning of the program in the fall. The first two or three weeks teachers or aides plan the children's programs, much as in a conventional, teacher-directed program. After pupils become familiar with the work stations and with the "daily plan," children who show the ability to read time and to govern themselves in a responsible manner are given a half-hour for an appropriate activity of their choice and a place to complete the activity. After a child works effectively for a week or so with one half-hour slot available for choice-making, additional half-hour periods are made available gradually—consistent with each child's ability to govern himself and to operate with greater freedom. In all cases, however, the child's choices are constrained by the guidelines posted in his pride and listed on his plan sheet. In addition, each pride teacher holds routine weekly or biweekly conferences with individual pupils to review their daily plans (for the past week or two) and to make recommendations on how their plans and their performance might be improved. In some cases some freedom (a few time slots) may be taken away for a week or two until performance is improved. In other cases increased freedom may be awarded. The pride teachers keep records of individual pupil conferences, and the records form the basis of parent conferences as well as judgments regarding specific instructional programs needed for individuals and small groups of children in the prides.

Reporting to parents and to pupils is based on the daily plan sheets and the progress records kept by the teachers. The progress records accumulated by the teacher through weekly or biweekly conferences are supplemented by standardized tests and other evaluative instruments associated with programmed materials.

When individual pupils have progressed to the point where they can plan for more than one day at a time, a weekly plan sheet is used to let pupils work out projects that will take several days to complete. Most pupils in the middle grades will eventually use weekly plans or even monthly plans. When pupils are using weekly or monthly plans, it is possible to incorporate out-of-school activities into the over-all instructional program as individual pupils see the relevance of out-of-school activities to their in-school projects.

Aids

Personalized Educational Programming at Southside School is extremely flexible and permits the involvement of supplementary equipment, materials, resource centers, and specialized personnel. To enrich the curriculum offerings, children may, during laboratory time, use tape recorders, headsets, phonograph records, games, a variety of projectors—filmstrip, cartridge, slide, 8 mm., and overhead—and other materials and automated equipment. Special conferences are scheduled to introduce the mechanics of operating new equipment; then individual children are instructed and tested in the use of the equipment. A list is made of pupils who are free to choose to operate the equipment on their own during laboratory time. Other, less skilled children are assisted by an aide.

A variety of programmed materials such as reading laboratories and Individually Prescribed Instruction mathematics are made available to the children in the resource center. Special teachers who have one or two hours a week available are included in the program. Their available time slots are listed in the work station schedule. Teachers assign some of the children to the special teachers; other children who are more reliable schedule themselves during lab time. When new teachers or new equipment are introduced into the school, pride teachers set up special instructional conferences to discuss the new laboratory opportunities and to demonstrate the new equipment.

Balance

Since social skills, concepts, and interpersonal relations are best learned through group activity, it is important that pride teachers plan the social studies program carefully to involve all the children in the school. Many individualized programs tend to isolate children from one another and reduce the amount of peer interaction and group learning. In Personalized Educational Programming, pride teachers plan units of study in the social studies, which become a major

source of group goals and activities. Out of the units of study come many small group and individual projects that are carried on in laboratory time, but the over-all goals of the units are set up by the teachers. Many academic skills are practiced in social studies projects, but academic skills are also taught in special instructional conferences on each of the skill areas.

Prospects

The Southside School pilot program was in effect during the 1968–69 school year, with about sixty children from low-income families in Durham, North Carolina. About half of these children continued in the program during 1969–70.

After one year of experience in the pilot program most children were able to handle a substantial part of their own educational activities responsibly. Many of the children who are in our disadvantaged group were unreliable at first and needed constant supervision and direct instruction, but all but one or two have made significant progress. The greatest problems occurred where noise and movement in one work area interfered with instruction in adjacent work stations. The physical layout of the school in 1969–70 separates verbal instructional stations from construction, art, and dramatic play areas. Distracting movement and noise were major deterrents to effective communication in the instructional centers. With the current physical arrangement of instructional areas and work stations, many of the problems of interference can be overcome.

The future of individualized instruction in the public schools depends upon the ability of school authorities to develop systems which will transfer greater and greater decision-making power to children within carefully structured limits that guide pupils and help them learn ways to govern themselves and achieve on their own. The problem of socialization in a technological society has become increasingly complex as mobility has increased and patterns of employment have been transformed. New educational systems are urgently needed to prepare all children to govern themselves and assume greater responsibility in planning their own educational experiences. Any system of education that is designed to be controlled completely by school authorities, however individualized it may be, seems to this observer to be incompatible with the economic and social imperatives of modern, technological America.

Students are demanding relevancy in all their educational experiences, and none of our educational institutions is exempt from increasing pressure to abandon instructional and administrative patterns that are no longer appropriate to the educational needs of students.

The innovative program at the Southside School in Durham, North Carolina is one of the many possible arrangements that offer increased degrees of freedom and decision-making within gradually broadened limits.

Learning to use freedom responsibly is fundamental to the effective acquisition and use of knowledge in a democracy.

REFERENCES

1. This article is based on remarks presented at the annual convention of the National Society for Programmed Instruction, Sheraton Park Hotel, Washington, D.C., April 10, 1969.

2. The Durham Education Improvement Program is a project of the Ford Foundation under the auspices of the Southern Association of Colleges and Schools, whose Education Improvement Project is funded by the Ford and Danforth Foundations. The Durham Education Improvement Program is jointly administered by Duke University, North Carolina College, Durham City Schools, Durham County Schools, and Operation Breakthrough, Inc.

ANALYTICAL DIAGNOSIS IN ARITHMETIC

There's No Easy Way to Diagnose Instruction

Author Unknown

ANALYTICAL DIAGNOSIS IN ARITHMETIC

When the purpose of diagnosis is to determine with greater exactness the specific phases or elements of some process in which a weakness or deficiency exists, diagnostic tests of an analytical type should be utilized. For instance, to locate weak spots in addition of whole numbers the following elements should be tested as shown in the illustrative test below.

1. Knowledge of basic addition facts.
2. The process of carrying in adding whole numbers.
3. Adding by endings
4. Bridging the tens
5. Addition of longer columns

DIAGNOSTIC TEST IN ADDITION OF WHOLE NUMBERS

1. Knowledge of basic addition facts (to be dictated)

a.	9	7	4	8	6	7	9	5
	8	6	9	7	5	9	3	7
b.	8	6	8	4	9	7	6	9
	5	9	8	8	5	4	8	9

2. Find the sums (carrying)

a.	43	23	160	b.	53	27	56
	25	30	200		38	33	28
c.	364	290	438	d.	296	387	892
	153	184	291		258	253	279
e.	806	9005	7060	f.	3156	6153	5904
	207	7005	8092		2798	2938	3096

3. Addition by endings:

a.	16 + 3 =	22 + 7 =	21 + 8 =	13 + 6 =
	25 + 2 =	24 + 5 =	32 + 6 =	34 + 3 =

4. Bridging the tens:

a.	19 + 7 =	14 + 9 =	18 + 9 =	13 + 8 =
b.	15 + 8 =	22 + 9 =	26 + 8 =	29 + 5 =
c.	17 + 8 =	29 + 6 =	33 + 7 =	37 + 6 =

5. Addition of longer columns:

a.	4	b.	5	c.	83	d.	5	e.	8	f.	59
	2		2		20		9		7		83
	3		7		14		2		9		64
							1		6		59

In analyzing the results of such tests of specific skills as those listed above, special consideration should be given to the pupil's rate of work, the accuracy of his responses, the level of difficulty at which a skill tends to break down, and evidence of any serious difficulty which clearly requires further investigation. The relationship between rate and accuracy is shown in the diagram below.

RATE	ACCURACY: High	ACCURACY: Average	ACCURACY: Low
High	I High in both rate and accuracy	II High in rate, average in accuracy	III High in rate, low in accuracy
Average	IV Average in rate, high in accuracy	V Average in both rate and accuracy	VI Average in rate, low in accuracy
Low	VII Low in rate, high in accuracy	VIII Low in rate, average in accuracy	IX Low in both rate and accuracy

The characteristics of pupils who fall into each group can readily be described. Pupils in Group I clearly are the most able ones. Pupils in Group IX clearly are the least able ones; it would undoubtedly be extremely difficult to bring about any considerable improvement in their work. Pupils in Group III are speedy but inaccurate workers, possibly because of careless or indifferent work, possibly because of a lack of basic knowledge and skills requiring further diagnostic study. Pupils in Group VII are efficient, accurate workers whose rate of work is slow; it is quite probable that their rate of work can be increased by well-directed practice, but accuracy should not be sacrificed to increase rate of work. Pupils in Groups II, IV, V, and VII probably do not require any special assistance other than guidance of regular instruction, whereas the work of pupils in groups VI, VIII, and IX should be carefully analyzed to determine underlying difficulties and deficiencies.

It is known that rate of work is an important factor conditioning accuracy of responses on the basic number facts. The correct responses for three pupils on a test of 25 difficult multiplication facts administered in five different ways that are given below show this.

Method of Testing	Pupil I	Pupil II	Pupil III
A. Unlimited time to find answers.....	25	25	18
B. Facts dictated at intervals of:			
(1) 5 seconds.....	25	22	15
(2) 4 seconds.....	25	18	10
(3) 2½ seconds.....	25	12	
C. Facts on test paper read at 3-second intervals intervals ...	25	22	11

The answers of Pupil I were all correct on the five tests; results were not affected at all by differences in the rates at which the products were written. The rates given under B were controlled by using recordings of facts and having the pupil write the products on squared papers as rapidly as the facts were dictated. The results for Pupil II show that he was able to give or work out all the answers when he had unlimited time; however, under time pressure his responses became less accurate, indicating lack of mastery and a tendency to guess at answers. The results for Pupil III indicate inaccurate work even when under no time pressure, increased inaccuracy under moderate time pressure, and an almost complete breakdown when the rate of writing answers was increased to intervals of 2½ seconds.

Ideally, all pupils should strive initially for accuracy and then gradually increase their rates of work without sacrificing accuracy. The rate at which different individuals will work will depend on each one's personal traits and characteristics and on his willingness to make the efforts needed to achieve a high level of performance through intelligent, effective practice. It must be remembered that rate of work will increase with maturity and therefore speed should not be unduly emphasized early in the learning process. Proficiency will increase when purposeful, systematic practice of meaningful skills is provided. The teacher's problem is to help children increase the efficiency of their thought habits and methods of work, which will automatically lead to more rapid responses.

In some of the more complex phases of arithmetic, such as division by two-place numbers, it is possible to administer a series of diagnostic exercises to determine the specific elements in the total process that may be contributory to an apparent deficiency in it. These diagnostic exercises can be constructed so as to test each of the basic skills included in the analysis of the division example given on page 202 as follows:

1. Ability to divide by one-place numbers, as an indication of knowledge of basic even and uneven division facts and of the steps in the division process itself.
2. Ability to estimate and place quotient figures correctly, first those in which the estimated quotient is the true quotient, as in $21\overline{)93}$, and then those in which the estimated quotient must

be corrected so as to find the true quotient, as in 34/231, 27/253, and 17/114.
3. Ability to multiply, as in finding products of divisor and quotient figures.
4. Ability to subtract, as in finding remainders.

The following diagnostic exercises illustrate the approach for identifying weaknesses in division by two-place numbers. If there are two or more incorrect answers on any of the four parts of the test, a difficulty that should be carefully studied may be suspected.

DIAGNOSTIC TESTS TO LOCATE WEAK SPOTS IN DIVISION

A. Division by one-place numbers:

	a	b	c	d	e
1.	7/525	8/3672	6/5909	9/7238	8/6839

B. Estimating and placing quotient figures:
Find the first quotient figure only.
Be sure to place it correctly.

	a	b	c	d	e
1.	20/1376	43/1498	83/5027	25/792	96/5803
2.	25/728	34/93	26/1376	39/3144	17/1486

C. Multiplying as needed in division:

1.	39/81 (2)	85/430 (5)	76/456 (6)	87/798 (9)	96/786 (8)
2.	49/402 (8)	73/523 (7)	18/97 (5)	38/160 (4)	59/541 (9)

Note. Check products; check then on subtraction.

D. Subtraction as needed in division:
Find the remainders only in these examples:

1.	43/3106 (7)	75/702 (9)	86/7110 (8)	39/27011 (6)	53/427 (8)
	301	675	688	234	424

Analytical diagnosis should also closely parallel the development of new work. At regular intervals, preferably at the end of each new unit of instruction, a suitably constructed developmental diagnostic test should be administered to a class to locate weak spots in the new work that has been presented so that they can be

promptly diagnosed and corrected. For example, a complete series of developmental diagnostic tests in addition of fractions should parallel the following series of instructional units:

Unit 1. Addition of like fractions, no carrying required, as in 1/3 + 1/3, $2\frac{1}{4} + 3\frac{1}{2}$, and $3 + 1\frac{1}{2}$.

Unit 2. Addition of like fractions, reduction of improper fractions and carrying required in finding sums, as in $\frac{1}{2} + \frac{1}{2}$, 3/4 + 3/4, $1\frac{1}{2} + 2\frac{1}{2}$, and 4 5/6 + 3 5/6.

Unit 3. Addition of unlike fractions with denominators in the same family, as in $\frac{1}{2} + \frac{1}{4}$, and 3 5/8 + 1 3/4.

Unit 4. Addition of unlike fractions with denominators not in the same family, as in 1/3 + $\frac{1}{4}$, 4 3/4 + 2 4/5, and 5 3/4 + 6 5/6.

<u>Analytical diagnostic tests are sometimes found in textbooks and workbooks. Where they are not available, the teacher can quite easily construct them according to the following specifications:</u>

1. Select an integrated instructional unit, for example, Unit 2 in addition of like fractions as defined above.
2. Break down this major unit into a series of the subtypes taught in the course of the unit. For example, the series of examples given below illustrates the increasing complexity of the basic subtypes, all of them taught in the course of this unit.

$$\begin{array}{r} 2/3 \\ +\ 2/3 \\ \hline \end{array} \qquad \begin{array}{r} 3/4 \\ +\ 3/4 \\ \hline \end{array} \qquad \begin{array}{r} 1/2 \\ +\ 1/2 \\ \hline \end{array} \qquad \begin{array}{r} 4\ 2/3 \\ +\ 5\ 2/3 \\ \hline \end{array} \qquad \begin{array}{r} 6\ 7/8 \\ +\ 7\ 5/8 \\ \hline \end{array} \qquad \begin{array}{r} 6\ 1/4 \\ +\ 4\ 3/4 \\ \hline \end{array}$$

3. In the diagnostic exercise itself there should be a row of at least three, preferably four, examples representing each of the six subtypes.

One incorrect example in a single row of the examples may be regarded as an accidental error; if there are two or more incorrect examples in a single row, a persistent difficulty is indicated.

4. To facilitate remedial treatment, developmental diagnostic tests should be keyed to special remedial helps and learning aids included in textbooks, workbooks, or suitable supplementary materials prepared by the teacher.

Similar tests can be prepared for all operations with whole numbers, fractions, and decimals. The major problem is to break down the developmental work in each process into a number of instructional units and then to identify the subtypes of examples presented in each unit. The following analysis of the subtypes in three major instructional units in estimating quotient figures illustrates the procedure:

Unit 1, dividing by even tens

20/40 20/63 20/74 40/120 50/257 60/402

Unit 2, dividing by other two-place numbers, no correction of the estimated quotient required.

21/63 22/68 21/70 24/75 34/136 34/142

Unit 3, correction of the estimated quotient necessary.

21/80 24/92 24/146 28/156 29/235 [illegible]/135

DIAGNOSTIC TEST IN ADDITION OF LIKE FRACTIONS -- TYPE 2

	a	b	c
1.	$\begin{array}{r} 2/3 \\ +\ 2/3 \\ \hline \end{array}$	$\begin{array}{r} 3/8 \\ +\ 6/8 \\ \hline \end{array}$	$\begin{array}{r} 4/5 \\ +\ 3/5 \\ \hline \end{array}$
2.	$\begin{array}{r} 3/4 \\ +\ 3/4 \\ \hline \end{array}$	$\begin{array}{r} 7/8 \\ +\ 5/8 \\ \hline \end{array}$	$\begin{array}{r} 5/6 \\ +\ 5/6 \\ \hline \end{array}$
3.	$\begin{array}{r} 1/2 \\ +\ 1/2 \\ \hline \end{array}$	$\begin{array}{r} 1/4 \\ +\ 1/4 \\ \hline \end{array}$	$\begin{array}{r} 5/8 \\ +\ 5/8 \\ \hline \end{array}$

	a	b	c
4.	$\begin{array}{r} 4\ 3/5 \\ +\ 5\ 2/3 \\ \hline \end{array}$	$\begin{array}{r} 4\ 3/8 \\ +\ 2\ 1/8 \\ \hline \end{array}$	$\begin{array}{r} 4\ 3/5 \\ +\ 2\ 4/5 \\ \hline \end{array}$
5.	$\begin{array}{r} 6\ 7/8 \\ +\ 7\ 5/8 \\ \hline \end{array}$	$\begin{array}{r} 8\ 3/4 \\ +\ 7\ 3/4 \\ \hline \end{array}$	$\begin{array}{r} 6\ 7/10 \\ +\ 4\ 9/10 \\ \hline \end{array}$
6.	$\begin{array}{r} 6\ 1/4 \\ +\ 4\ 3/4 \\ \hline \end{array}$	$\begin{array}{r} 5\ 1/2 \\ +\ 7\ 1/2 \\ \hline \end{array}$	$\begin{array}{r} 6\ 1/ \\ +\ 5\ 2/3 \\ \hline \end{array}$

Diagnostic Test in Multiplication of Whole Numbers

NAME _____ GRADE OR COURSE _____ AGE _____

SCHOOL _____ TEACHER _____ SEX _____ DATE _____

1. One-Place Multipliers

	a	b	c		a	b	c
1.	34	213	131	2.	30	401	200
	x2	x3	x6		x6	x4	x5
3.	47	16	29	4.	84	57	89
	x2	x4	x3		x4	x6	x9
5.	216	851	659	6.	845	906	6070
	x5	x7	x8		x4	x7	x9

No. Correct

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Total _____

2. Two- and Three Place Multipliers

	a	b	c		a	b	c
1.	18	30	247	2.	12	26	48
	x10	x10	x10		x20	x20	x40
3.	46	84	257	4.	760	806	900
	x36	x95	x84		x59	x48	x67
5.	397	509	6050	6.	728	932	
	x300	x603	x950		x259	x487	

No. Correct

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Total _____

PRE-TEST AND POST-TEST FOR
PLANNING FOR EDUCATIONAL DECISION-MAKING IN THE 70'S

I. Fundamentals

1. The most marked difference between "basic" and "applied" research in education is in the extent to which

   a. control and precision are emphasized.
   b. the Hawthorne effect operates.
   c. implications are drawn concerning school practice.
   d. theoretical constructs are tested.

2. The major difference between pure and applied research is the

   a. use of research design.
   b. methods of population selection.
   c. stability of conclusions reached.
   d. application of the findings.

3. Which one of the following defects is almost impossible to remedy in the process of problem-solving <u>through personal experience</u>?

   a. Subjects and situations are probably not typical.
   b. Assumptions are not identified.
   c. Meanings are not defined.
   d. Processes of solving are not replicable.

4. Which one of the following "methods of knowing" is most characterized by self-correction?

   a. tenacity
   b. authority
   c. <u>a priori</u>
   d. scientific

5. Which of the following is the least important aim of "pure" research?

   a. control
   b. prediction
   c. systematization
   d. application

6. The aim of theory is the explanation and prediction of phenomena.

   a. True
   b. False

7. Which one of the following best describes induction?

a. Specific to general.
b. General to specific.
c. Specific to specific.
d. General to general.

Read the quotations in items 8-10 below. What source of knowledge is represented by each statement? Use the following key:

a. authority
b. inductive reasoning
c. deductive reasoning
d. tradition

8. Mrs. Adams said "I know that the children in the Head Start program have been given considerable practice in reading readiness skills. Since it is known that practice improves these skills, it figures that those children who have participated in Head Start will be superior in reading readiness."

9. Miss Brown replied, "I don't believe that. Our principal says the Head Start program did no one any good. Therefore, I expect the Head Start children to be no better on reading readiness than the other students."

10. Mrs. Carter said, "Let us examine and measure the children on reading readiness in every way we can to determine whether the Head Start children do better or not ."

11. One difference between the experimental and descriptive methods in research has to do with the

a. setting of the study.
b. control of variables.
c. number of subjects.
d. recording of data.
e. time span of the study.

12. The most important characteristic of the experimental method is

    a. the repetition of observations.
    b. the control and systematic variation of the conditions of observation.
    c. the making of exact measurements.
    d. the concept of correlation.

13. An investigator was interested in studying teacher success. He selected two groups of teachers: one that was highly successful and one that was not too successful. He found that the more successful teachers tend to be more out-going, more independent, and more interested in people than less successful teachers. The type of design used in this study was

    a. experimental.
    b. ex post facto.
    c. longitudinal.
    d. correlational.
    e. cross-sectional.

Midland Central School District has recently adopted the "new math" into its program at the 7th grade level. It is now interested in a study of 6th grade students in order to evaluate the effects of the new method. One hundred students were included in the study, 25 from each of the four elementary schools in the district. The 25 students from each school were identified and included in the study in such a way that all students in the 6th grade in each school had an equal opportunity to appear in the 25 from each school. The total of 100 students were then placed into three testing groups by a method which assured that there would probably be no differences between these three groups in terms of extraneous variables. This was done so that three different forms of a standardized achievement test could be used and compared. The students were then administered the tests. The results were analyzed and conclusions drawn concerning the success of the new method with 6th graders in the school district.

14. Random selection was involved in

    a. placing students in each of the three testing groups.
    b. administering tests to the three testing groups.
    c. identifying 25 students from the 6th grade in each school.
    d. deciding to use modern math as an instructional method.

Suppose a researcher wanted to determine the effects on the attitudes of citizens toward centralized government of the electrical blackout which occurred November 9, 1965, in Northeastern United States. He hypothesized that those people living within the blackout area would be more opposed to Federal control, since a Federally initiated grid system allowed the blackout to spread from its origin and since these people were actually affected by the blackout. He selected a standardized, objective instrument to measure attitudes toward centralized versus local control. Assume that norms on this instrument were available for the nation as a whole, the blackout region and the region outside the blackout area. He selected .05 per cent random samples from the citizens 21 years of age or older living in the blackout area and from those living outside the blackout area. He administered and scored the instrument and tested the significance of the difference between average scores for the two groups. He found a marked difference: the persons living in the blackout zone were much more opposed to Federal control. He thus concluded that the blackout did in fact affect attitudes toward centralized government for those who actually experienced the blackout.

15. What major type of inquiry best characterizes the design of this study?

    a. ex post facto research
    b. true experimental research
    c. sample survey research
    d. attitudinal inventory research

16. Which of the following problems would most require historical research?

    a. trends in patterns of financing Georgia public schools
    b. current concepts of "discipline" of public high school principals in Georgia
    c. effects of "social acceptance" on tendencies to "withdraw"
    d. the developmental needs of high school youth in Clarke County, Georgia

17. Which one of the following is an appropriate step to take in the <u>external</u> criticism of an original document used in historical research?

    a. determining who actually wrote the document.
    b. establishing the author's possible motives for writing the document.
    c. making a study to determine the author's meanings.
    d. analyzing the author's possible bias.

18. One of the weaknesses of the historical method is that the researcher has available as data "selected conceptions of reality rather than reality itself." All of the following are implications of this weakness EXCEPT

    a. important facets of historical events may never be accessible to the researcher.
    b. the descriptions of reality available to the researcher may be inaccurate or in error.
    c. the findings of historical research must be considered undependable
    d. external and internal criticisms of the data are crucial to the success of the research.

19. When reading a research report in a respectable journal, we should

    a. accept the conclusions without question.
    b. accept the conclusions without question only if the author is a well-known authority.
    c. accept those conclusions that agree with our opinion.
    d. reject all conclusions if they are based on an inductive argument.
    e. evaluate the conclusions according to the correctness of the research methodology.

20. The acceptance of experimentation in education has been, according to Campbell and Stanley,

    a. increasing steadily over the past six decades.
    b. sporadic overall but highest in the 1920's and lowest in the mid-1930's.
    c. decreasing steadily over the past six decades.
    d. at a constantly high level over the past four decades.

21. A journal in which appear brief summaries of the substance of primary research completed within a selected broad division of education over a given period of time (e.g., three years) is the

    a. Review of Educational Research.
    b. Educational Abstracts.
    c. Journal of Educational Research.
    d. Educational Research Bulletin.

22. The most recent data regarding dependable knowledge in a given educational field are likely to be found in

    a. The Encyclopedia of Educational Research.
    b. A.E.R.A. Handbook of Research on Teaching.
    c. Yearbooks of the National Society for the Study of Education.
    d. current research periodicals.

23. In which one of the following would one find a critical review of the Iowa Test of Basic Skills?

    a. Mental Measurements Yearbook
    b. Encyclopedia of Educational Research
    c. Buros' Tests in Print
    d. Educational and Psychological Measurements
    e. Review of Educational Research

The following research resources apply to items 24 - 27 below:

1. Handbook of Research on Teaching
2. Encyclopedia of Educational Research
3. Review of Educational Research
4. NEA Journal
5. Readers Guide
6. Psychological Abstracts
7. Psychological Bulletin
8. Tests in Print
9. Mental Measurements Yearbook
10. American Educational Research Journal

In which would you look to find

24. A brief summary of the research on classroom organization:

    a) 1, b) 2, c) 3, d) 8, e) 9

25. To obtain a critical review of the Lorge-Thorndike Intelligence Test:

    a) 2, b) 3, c) 7, d) 9, e) 10

26. A general and complete summary of research within the last three years on "Educational and Psychological Testing":

    a) 1, b) 2, c) 3, d) 6, e) 9

27. A high quality publication of original research:

    a) 3, b) 6, c) 7, d) 10

II. Steps in the Process of Research

28. In conducting research, which of the following steps should generally be taken first?

    a. collection of data
    b. compilation of a bibliography of similar researches
    c. formulation of a working hypothesis
    d. careful formulation of the problem to be solved

29. A hypothesis is

    a. a general statement which has been proved.
    b. a general statement not subject to proof.
    c. a statement temporarily accepted as true.
    d. a statement considered as false until proved true.

30. The lowest level in the hierarchy of certainty of scientific knowledge is represented by the

    a. hypothesis.
    b. theory.
    c. law.
    d. principle.

31. A substantive or research hypothesis

    a. is directly testable.
    b. has to be translated into operational and experimental terms.
    c. is dependent on the statistical hypothesis.
    d. predicts how the analysis of quantitative data will be resolved.

32. The first step in the empirical testing of a research hypothesis is

    a. collecting relevant data.
    b. deducing consequences that can be observed.
    c. selecting or developing tests or observational systems that will provide data.

33. When a general problem of interest to an individual arises and he makes the decision to undertake a research project towards its solution, he must first identify

    a. the studies he will pattern his project after.
    b. the tests available to solve the problem.
    c. the variables inherent in the problem.
    d. the inference pattern related to the problem.

34. The scientist affords the facts a chance to prove or disprove something by hypothesizing in advance.

    a. True
    b. False

35. Hypotheses are statements about relations between variables.

    a. True
    b. False

In items 36-40 evaluate the adequacy of each statement as a scientific hypothesis by using the following key:

    a. Adequate hypothesis
    b. Inadequate, less than two variables
    c. Inadequate, no statement of relationship
    d. Inadequate, not testable

36. If programmed text materials are used to teach arithmetic drill materials, then mastery of the materials (90% or better on a criterion test) will follow.

37. If subjects vary in their level of anxiety (as measured by the M.A.S.), then they will differ in their achievement on a timed spelling test.

38. Frustration (produced by preventing children from reaching solutions to problems) produces agression.

39. If people are prejudiced, then they identify minority group members by their faces more readily than do unprejudiced people.

40. Group therapy (as opposed to non-group therapy) will result in individuals with more adequate value systems.

41. The report of a study began with this statement: "The purpose of this study is to determine the differences between 'under achieving' and 'normally achieving' students in the seventh and eighth grades with respect to variables in personality, aptitude, study habits, and home environment." Is the statement a hypothesis?

    a. No, because the statement is not posed in the form of a question.

    b. No, because it does not propose a relationship to be tested.

    c. Yes, because it will lead to the testing of the significance of differences.

    d. Yes, because it does refer to the main purpose.

42. Which of the following is a <u>necessary</u> characteristic of an adequately defined problem?

    a. It is based on previous research.
    b. It is developed from clearly defined objectives.
    c. It is based on the analysis of data already available.
    d. It leads logically to the listing of testable hypotheses.

43. The most important criterion for evaluating the procedures section of a research study is: Has the author explained his procedures in such a way that will enable the reader to _____ the study?

    a. criticize
    b. comprehend
    c. statistically analyze
    d. repeat
    e. deduce consequences of

44. In selecting a group for a study, the initial step is to

    a. identify all the units which compose the total population.
    b. use a table of random numbers to help provide an unbiased sample.
    c. provide for double-sampling techniques to insure a representative sample for study.
    d. sample every odd number item and compare the obtained results with a sample of every even numbered item.

45. All of the following are dangers to be watched for and weaknesses to be corrected in the collection and analysis of data EXCEPT which one?

    a. Are the data adequate?
    b. Are the data carefully sifted and considered for accuracy and authenticity?
    c. Do the data substantiate the hypothesis?
    d. Does the evidence really mean what it seems to mean--are the conclusions sound?

46. The statistical methods to be used in a study should be considered

    a. before the hypotheses have been formulated.
    b. as the study is being designed.
    c. after the data have been collected.
    d. after the data have been tabulated.

47. A null hypothesis in a comparative experiment is

    a. always false.
    b. always the same as the research hypothesis.
    c. a statistical hypothesis that assumes that the subjects in two treatment groups were equal before treatment began.
    d. a statistical hypothesis that assumes there is a difference among the effects of treatments.
    e. a statistical hypothesis that assumes there is no difference among the effects of treatments.

48. Defining "learn more" by a score on the Iowa Test of Basic Skills is a (an)

    a. measured operation definition.
    b. experimental operational definition.
    c. constituted definition.
    d. synonym definition.

Read and examine the following statement. For each term on the left, select the phrase on the right (taken from the statement) which correctly illustrates each term. Each phrase may be used more than once.

"What effects do socio-economic background factors have on students' ability in visual perception as measured by performance in the Renshaw Visual Acuity Test?"

49.	dependent variable answer_____	a) socio-economic background factors
50.	construct/intervening variable answer_____	b) ability in visual perception
51.	operational definition answer_____	c) performance in the Renshaw Visual Acuity Test
52.	independent variable answer_____	

III. Experimental Research

53. According to Kerlinger, one basic purpose of research design is

    a. to provide research questions.
    b. to suggest research problems.
    c. to control variance.
    d. to control independent variables.

54. The main technical function of research design in education is to

    a. control extraneous systematic variance.
    b. minimize error variance.
    c. maximize systematic variance.
    d. (b) and (c)
    e. all of the above

A sociologist surveyed, by means of a mail questionnaire, the attitudes of persons who managed a certain group of hotels and restaurants as to whether they would accept Indians as guests or customers. He then arranged for an Indian couple to visit these hotels and restaurants, and subsequently learned from the couple which establishments had actually served them. He found that of the establishments which had served the Indian couple, over 90 percent had previously stated they would not serve Indians.

55. Expressed attitude toward a course of action is not necessarily a reliable indicator of behavior.

    a. This conclusion is warranted by the study.
    b. This conclusion is not warranted by the study.

56. Surveys measuring expressed attitudes contribute little to the understanding of what people will do in everyday practice.

    a. This conclusion is warranted by the study.
    b. This conclusion is not warranted by the study.

57. Campbell and Stanley introduce McCall's work as

    a. an example of the best current thought in experimental design.
    b. a natural follow-up for the work done earlier by Fisher.
    c. an early yet insightful statement of fundamental design techniques and methodologies.
    d. an example of heavy reliance on designs of the pre-experimental type.

58. A sample is considered to be random if every element of the population has an equal and independent chance of being included in the sample.

    a. True
    b. False

59. Statistics is to parameter as

a. population is to sample.
b. sample is to population.
c. mean is to variance.
d. variance is to mean.

60. When a researcher states that a result is significant, he means

a. the effect is a practically important one.
b. the gain scores are not correlated.
c. the result is unlikely to be a chance occurrence.
d. the sample values are different.

61. The results of an experiment are said to be confounded when

a. they contradict previous research findings.
b. they are contrary to what was predicted.
c. they are unexpected.
d. the effects of the variables cannot be unambiguously evaluated.
e. the variables interact with each other.

62. Which of these terms least belongs with the others?

a. experimental design
b. randomization
c. correlation
d. manipulation
e. control

63. Of the following, the most important determinant of the extent to which the results of a research study can be generalized is the

a. nature of the sample used in the study.
b. adequacy of the instruments used to collect data.
c. degree to which the effects of extraneous variables have been controlled.
d. ease with which the research design can be replicated.

64. The major function of the control group in an experimental study is to measure the effect of

a. differences in difficulty of pre- and post- tests.
b. external factors upon the dependent variable.
c. interaction of group characteristics and experimental treatments
d. administration of a pre-test prior to application of the experimental treatment.

Use the following to answer questions 65-69.

A coach in a large high school thinks that ballet training will improve the batting average of his baseball team. He decides to have half the team take six weeks of ballet training before the baseball season begins while the other half does not take such training. He will then compare the season batting averages of group A, those with ballet training, and group B, those without ballet training, by comparing the mean of group A with the mean of group B.

65. This study would be classified as

    a. a school survey
    b. an ex post facto or casual-comparative study.
    c. a correlational study.
    d. a trend study.
    e. experimental research.

66. In order to test his hypothesis, the coach should have which group take ballet training?

    a. the best players
    b. the poorest players
    c. a randomly selected group
    d. those who volunteer
    e. good players who show poor coordination

67. The control group would be those who

    a. take ballet training.
    b. do not take ballet training.
    c. try out for the baseball team.
    d. have high batting averages.
    e. are willing to cooperate in the experiment

68. The independent variable is

    a. ballet training
    b. batting average
    c. runs batted in
    d. the size of the school
    e. the grades players make in ballet school

69. This study would be classified

    a. one group pre-test/post-test
    b. control group pre-test/post-test
    c. control group post-test only
    d. Solomon four group design
    e. correlational study.

70. Suppose the group with ballet training completes the season with a higher mean batting average than the group without ballet training and statistical tests indicate that this difference is highly unlikely to be a function of chance. Assuming that no problems of internal validity are present, the coach should:

    a. reject the null hypothesis.
    b. reject the experimental hypothesis.
    c. declare the experimental hypothesis is proven.

71. The external validity question in this study would be:

    a. Was ballet training really responsible for the differences in batting average?
    b. Was the coach unethical in making baseball players take ballet training?
    c. Is ballet training worth the expense it involves?
    d. Would ballet training improve the batting performance of other teams?

72. Hawthorne effect would be most likely to increase the scores of

    a. the best players.
    b. the poorest players.
    c. the players with ballet training.
    d. the players without ballet training.
    e. all players.

73. One of the main reasons for working with <u>samples</u> rather than <u>populations</u> is that

    a. populations, being finite, cannot be discussed in terms of intervals.
    b. the experimenter, because of practical reasons, rarely can locate or test the population.
    c. statistics are appropriate to use with samples but not appropriate to use with populations.
    d. population measures are biased, whereas the repeated use of samples controls bias.

74. Which of the following precedures would yield the most appropriate data for studying the relation between intelligence and achievement?

    a. administering an achievement test and an intelligence test to one sample of subjects.
    b. administering an achievement test to one sample of subjects and an intelligence test to another sample of subjects.
    c. administering an achievement test to a sample of subjects, all of whom have an I.Q. of 100.
    d. administering an achievement test to 2 samples of subjects and an intelligence test to 2 different samples of subjects.

75. The entire collection of elements or measurements about which an inference is to be made is

    a. an experimental design.
    b. an interval estimate.
    c. a population.
    d. a sample.

76. Experimental and control groups are frequently equated by matching pairs of subjects on one or more variables (e.g., intelligence) and assigning one member of each matched pair to the experimental group and the other member to the control group. What factor is the most crucial in determining the effectiveness of this procedure for developing equivalent groups?

    a. whether the total group of subjects is a random sample from the population of interest
    b. whether equal numbers of males and females were assigned randomly to treatment or control groups
    c. whether the matching variable(s) are exclusively and highly related to the dependent variable of interest
    d. whether the study is experimental or _ex post facto_

77. Parameter is to population as

    a. statistic is to sample.
    b. sample space is to frame of reference.
    c. statistic is to probability.
    d. non-parametric is to parametric.
    e. statistic is to measurement.

78. If α and β are characteristics of population P, and if a and b are estimates of α and β on the basis of a sample, then

    a. α and β are statistics and, a and b are parameters.
    b. α and β are parameters and, a and b are statistics.
    c. α, β, a, b, are statistics.
    d. α, β, a, b, are parameters.

79. Which of the following terms best fits the following definition? "A conclusion about a population, made on the basis of what has happened in a sample of observations, the conclusion being drawn with a calculable risk of being in error" is a(n)

    a. population parameter.
    b. random selection.
    c. statistical inference.
    d. unbiased estimate.

Suppose you wish to compare experimentally the effects of two drugs on reaction time. You randomly select 30 patients from each of two hospitals. You administer treatment 1 to the patients in hospital A and treatment 2 to the patients in hospital B. You then test each subject individually on a single apparatus for measuring reaction time, compute the means and standard deviations for the two groups, and calculate a two tailed t test using the .10 level of significance.

80. What source of error is most likely to result from this design?

    a. Initial differences between hospitals could obscure differences between the effects of the drugs.
    b. Using only one testing apparatus prevents generalization.
    c. Comparing two treatments yields too little information; instead, each should have been compared with a control.
    d. The effects of one drug may interact with the effects of the other.

81. Is the statistical analysis appropriate?

    a. Yes, the t test will yield a valid estimate of the statistical difference between the test results for these samples.
    b. Yes, the t test will yield the information necessary for determining which drug is superior.
    c. No, a one tailed test is required.
    d. No, the .10 level of significance is too large.

82. Which of the following correctly states the extent of permissible generalization in the formation of a statistical inference? The generalization pertains to all individuals

    a. possessing characteristics similar to those used in the study.
    b. actually used in the study.
    c. suggested by a carefully developed analogy.
    d. from the population sampled.

83. Characteristics of persons or things which can assume different values are called

    a. distributions.
    b. observations.
    c. data.
    d. variables.

84. In an experiment to investigate the extent to which learning changes systematically with increasing age, the independent variable would be

    a. length of the list to be learned.
    b. age levels of those tested.
    c. change from trial and error to insightful learning.
    d. number of errors made on learning trials.

85. The handedness of a person is a (an)

    a. continuous variable.
    b. discrete variable.
    c. independent variable.
    d. dependent variable.
    e. intervening variable.

86. In an experiment to determine the effect of the tempo of music on workers' productivity in a factory setting, the dependent variable is the

    a. tempo of the music.
    b. factory setting.
    c. number of workers.
    d. workers' productivity.

87. Which term least belongs with the others?

    a. dependent
    b. ordinal
    c. response
    d. criterion

88. A dependent variable is generally a classification variable which may be manipulated or controlled in an experiment.

    a. True
    b. False

89. The dependent variable is the treatment variable which the investigator varies for purposes of controlling the results.

    a. True
    b. False

90. Students taught first aid by programmed instruction will achieve at a higher level than those taught first aid by the traditional method. In the above hypothesis the independent variable is

    a. students.
    b. level of achievement.
    c. programmed instruction.
    d. method of instruction.
    e. first aid test scores.

E plans an experiment in which 60 children are to be randomly assigned to four treatment groups: extrinsic reward (candy) and extrinsic punishment (loss of recess); extrinsic reward only; extrinsic punishment only; and neither extrinsic reward nor punishment. Before the study begins, E gives an IQ test to all the pupils to use in the statistical analysis, but not to be used in assigning pupils to groups. To determine the effect of the treatments, a geography test is given.

91. In this experiment, the assigned independent variable is

    a. treatment.
    b. IQ.
    c. geography test score.
    d. There is none in this experiment.

92. In this experiment, the active independent variable is

    a. treatment.
    b. IQ.
    c. geography test score.
    d. There is none in this experiment.

E plans an experiment to determine if use of certain specified amounts of a drug will increase the IQ scores differentially for male and female pupils. He uses fifth graders for the study.

93. In this experiment, IQ serves as

    a. an active independent variable.
    b. an assigned independent variable.
    c. a dependent variable.
    d. Both A and B are correct.

94. In this experiment, sex serves as

    a. an active independent variable.
    b. an assigned independent variable.
    c. a dependent variable.
    d. None of the above are correct.

95. In this experiment, the drug serves as

    a. an active independent variable.
    b. as assigned independent variable.
    c. a dependent variable.
    d. None of the above are correct.

96. The experimenter usually has as his objective the

    a. minimizing treatment or experimental variance.
    b. maximizing extraneous variance.
    c. minimizing error variance.
    d. None of the above.

The English department of the Sunbury Junior High School is concerned with improving the reading speed and comprehension of 7th graders. They have decided to conduct a training experiment utilizing the Tachitron and appropriate sets of training cards. While developing the design for the study, several important considerations were raised. First, it appeared crucial to be able to determine whether or not improvements in reading skill as noted through scores on a reading achievement test would in fact be due to the training. Second, it was also realized that in order to avoid mistakes and inconsistencies in grading, it would be important to develop an objective and accurate method of scoring the test. There was also concern about the effects of other factors on the results of the study. It was noted, first, that many of the students came from disadvantaged homes and had limited language experiences. Other students had come from a grade school system that employed a special trainin program in reading. The intelligence range of the students was quite wide and might also be an important factor.

97. In the above study, experimental variance would be found in

    a. intelligence test scores.
    b. scores on the reading achievement test.
    c. the research design of the study.
    d. the method of scoring.

98. Which of the following constitutes a type of error variance controlled in this study?

    a. socio-economic levels
    b. the initial low level of reading ability
    c. mistakes and inconsistencies in scoring the achievement test
    d. the training method

99. An example of an extraneous variable in the study would be

    a. previous participation in a reading training program.
    b. scores on the reading achievement test.
    c. the training method.
    d. mistakes and inconsistencies in scoring.

100. "A 'true' experimental design must incorporate pre-test." (In the Campbell & Stanley sense) This statement is

    a. true.
    b. false.
    c. usually, but not always, true.
    d. usually, but not always, false.

101. When a pre-test and post-test are used on all subjects in the experimental and control groups

a. the pre-test may influence post-test results.
b. the E knows whether it is reasonable to assume that both groups began at a similar point or not.
c. there may be interaction between pre-test and treatment effects.
d. a and b are both true.
e. a, b, and c are all true.

If Method A works better with bright (intelligent) students and Method B with dull students (as measured by the ABC test,) and the pattern is even more pronounced for boys than girls, we know:

Indicate True or False for items 102-107

102. Girls achieved better than boys.

a. True
b. False

103. The overall girl and boy means differed significantly.

a. True
b. False

104. There was a sex-by-intelligence interaction.

a. True
b. False

105. There was a method-by-intelligence interaction.

a. True
b. False

106. There was a method-by-intelligence-by-sex interaction.

a. True
b. False

107. The overall means for Method A and B differed significantly.

a. True
b. False

108. In the above factorial design, how many factors are there?

a) 0, b) 1, c) 2, d) 3, e) 4 or more

109. How many dependent variables are there?

a) 0, b) 1, c) 2, d) 3, e) 4 or more

110. Which type of sampling is used if the population is divided into groups by certain common characteristics and random sampling is done from each group?

a. cluster
b. systematic
c. stratified
d. proportional
e. double

111. A researcher draws a sample by selecting every 10th name in a telephone directory. Which of the following sampling types has he used?

a. simple random
b. double
c. stratified
d. systematic

112. If 50 students from a group of 200 7th termers were to be studied by the Rorschach technique, the sample (50) would be considered random if

a. there were the same number of boys and girls in the group of 50.
b. every boy and girl in the 7th term had an equal opportunity to be selected.
c. two students were selected whose names began with each of the 25 letters of the alphabet except X.
d. every IQ level (ex: 80-85,85-90,90-95, etc.) was equally represented by the 50 students.

113. Selecting the children to be involved in an experiment by randomly identifying the schools to be involved represents

a. stratified sampling.
b. double sampling.
c. systematic sampling.
d. cluster sampling.

114. Two characteristics of a random sample are: (1) independence of selections, (2) equal probabilities of selection.

115. If a sample is large and randomly drawn, then it is quite likely it is representative of the population.

a. True
b. False

116. Random sampling guards against known and unknown biases.

a. True
b. False

117. Separating a group of possible subjects into categories (e.g. males and females) before selecting subjects (by use of a table of random numbers) to receive a particular treatment is known as drawing a

a. stratified random population.
b. simple random sample.
c. unbiased random sample.
d. stratified random sample.

118. When a sample has been drawn at random, we can still only make probabilistic statements about its relationship to the population from which it was drawn.

a. True
b. False

119. Selecting a sample at random means that

a. the sample drawn will definitely be representative.
b. every member of the group drawn from has an equal and independent opportunity of being selected.
c. Both A and B are correct.
d. Neither A nor B is correct.

120. A sample selected to assure that certain subgroups in the population will be represented in the sample in proportion to their numbers in the population itself is called a

a. random sample.
b. stratified sample.
c. pilot sample.
d. heterogeneous sample.

121. The most efficient means of ruling out factors such as maturational level, ability, age, etc., as rival explanations of an observed post-test difference between an experimental and a control group is

a. careful matching of the experimental and control groups on all possible factors (e.g., sex, IQ, and achievement).
b. a time-series quasi-experimental design.
c. random assignment of subjects to the treatment groups.
d. the administration of a pre-test.

122. An investigator wishes to evaluate the influence of three methods of teaching reading: the basal reader method, the I.T.A. method, and the individualized reading instruction method. In setting up his groups for study, he should be sure to

a. assign the children randomly to classes.
b. assign teachers randomly to classes.
c. assign the method of reading instruction randomly to classes.
d. all of the above.
e. none of the above.

123. In a large high school the 25 students who scored highest in an English pre-test were placed in a special class. At the end of one semester they were given another English achievement test. The mean grade level equivalents were compared for the two tests. This is an example of

a. one group pre-test/post-test design.
b. randomized control-group pre-test/post-test design.
c. randomized Solomon four group design.
d. randomized control-group post-test only design
e. factorial design.

124. The "halo" effect in rating refers to

a. influence of one rater upon another.
b. tendency to rate a person higher when you know him better.
c. spread of a general impression of a person to the rating
o of specific characteristics.
d. tendency to make ratings too high.
e. tendency not to be too hard in rating people one doesn't like.

125. Subjects performing well merely because they are being observed (and not necessarily because of any effect of treatment) are considered to be under the influence of

a. the Hawthorne effect.
b. the novelty effect.
c. the halo effect.
d. none of the above.

126. The internal validity of an experimental design is concerned with the question:

a. to what extent can the experimental findings be generalized?
b. did the independent variable really produce a change in the dependent variable?
c. how representative is the setting selected for the experiment?
d. will the findings provide information about situations in which variations of the independent variable are present?

127. When the results of an experiment are true only under certain very special conditions and do not generalize far beyond these particular experimental conditions, the experiment is said to have

a. low internal validity.
b. low external validity.
c. high external validity.

128. Which of the following is an internal validity question in experimental research?

a. Has maturation influenced the dependent variable?
b. Was the sample representative of the population?
c. Has the hypothesis been stated in operational form?
d. How widely can the results of the experiment be generalized?
e. Are the potential results of the study worth the cost?

129. Which term least belongs with the others?

a. internal validity
b. external validity
c. generalizability
d. representativeness

130. "To what populations, settings, treatment variables, and measurement variables can this effect be generalized?" might most appropriately be asked in relation to the concept of

a. criterion validity.
b. internal validity.
c. external validity.
d. construct validity.

131. "Did in fact the experimental treatments make a difference in this specific experimental instance?"might most appropriately be asked in relation to the concept of

a. criterion validity.
b. internal validity.
c. external validity.
d. construct validity.

132. In evaluating a research project, what are the two most important criteria?

a. internal validity and external validity.
b. representativeness and generalizability.
c. practical significance and statistical significance.
d. internal consistency and reproducibility.

133. A pre-test of achievement is given to an unselected group of 40 students five minutes prior to an hour's instruction in addition. The post-test that immediately followed the instruction showed a 10 point gain from the pre-test. It is concluded that the instruction was effective in producing a gain. Which one of the following sources of invalidity could also explain the pre-test to post-test gain?

a. statistical regression
b. interaction of selection and maturation
c. instrumentation
d. testing

134. Professor "X" graded initial essay exams for his class, then graded the final essays to see if improvement had occurred. Which of these <u>least</u> jeopardizes internal validity?

a. history
b. maturation
c. testing
d. instrumentation
e. regression

135. Which would probably be the most serious threat to internal validity?

a. history
b. maturation
c. testing
d. instrumentation
e. regression

136. A threat to internal validity that may occur from processes within respondents operating as a function of the passage of time per se (and not specific to particular events) is known as

a. maturation
b. instrumentation
c. regression
d. reactivity

137. When groups selected for their extreme scores on a pre-test are used in an experiment, a likely source of invalidity in some designs is

a. selection
b. maturation
c. regression
d. interaction of selection and treatment

138. In experimental design, when comparisons are made of groups which have been selected on the basis of their extreme scores, the post-test means of the groups tend to move toward the means of the entire population from which the extreme groups were selected. This factor which jeopardizes validity of the findings is termed

a. differential selection
b. interaction of selection and X.
c. experimental mortality
d. statistical regression

139. Which of the following is a factor jeopardizing the external validity of an experiment?

a. statistical regression
b. interaction of selection biases and the experimental variable
c. instrumentation
d. history

140. Children having attended nursery school were compared with those having no such experience on a readiness test at the beginning of Kindergarten and were found to be superior. The research attributed this superiority to the children's nursery-school experience. The greatest threat to internal validity is

a. history
b. maturation
c. testing
d. selection
e. experimental mortality

141. Pupils in the remedial reading program increased in problem solving ability during the course of the year. Attributing the cause to the change of the program overlooks several alternative factors, the most significant of which is probably

a. selection
b. testing
c. experimental mortality
d. regression

142. Students with low, average and high initial self-esteem were counseled. The low group gained most over 2 months. Assuming the counseling was more effective with the low group fails to consider (greatest threat)

a. history
b. maturation
c. testing
d. instrumentation
e. regression

IV. Methods of Data Collection

143. Annual achievement tests which are parts of the school testing program, illness records, daily assignments and other routine characteristics and activities of the school are considered to be

    a. reactive measures
    b. nonreactive measures

144. Which of the following is most likely to provide the best description of the objectives of instruction in a school system?

    a. teacher ratings of the students
    b. standardized aptitude tests
    c. teacher-made achievement tests
    d. standardized achievement tests

145. In which way are teacher-made tests superior to standardized tests?

    a. They are more reliable for evaluating differences among very poor and very good students.
    b. They provide more valid measures of the teachers' specific objectives.
    c. They provide a better measure of the student's grasp of important facts and principles.
    d. They are simpler to administer and score.

146. Which of the following is most characteristic of <u>skilled</u> as opposed to unskilled observers in research?

    a. making generalized descriptions or evaluations rather than noting specific incidents
    b. interpreting behavior on the basis of limited data rather than waiting for confirmation by subsequent incidents
    c. giving the child's behavior rather than the personal reaction of the observer
    d. recording primarily dramatic or negative incidents

147. Which of the following is essential to <u>skilled</u> observation as a research technique in studying a pupil's behavior?

    a. recording primarily dramatic behavior
    b. recording primarily the "whys" of the behavior observed
    c. recording primarily the "whats" of the behavior
    d. using data obtained as bases for generalizations concerning the behaviors of other pupils

148. According to Kerlinger, sampling of behavior by the observation method can be considered as consisting of two aspects:

a. person sampling and event sampling
b. person sampling and time sampling
c. event sampling and time sampling
d. criterion sampling and person sampling

149. Is it important to follow up those persons in a survey-sample who have failed to return questionnaires mailed to them? (Assume that the direct-mail method is appropriate.)

a. No, because a certain loss must be expected.
b. No, because such delayed returns would be of doubtful value.
c. Yes, because the sample at hand may be biased.
d. Yes, because the size of sample should be as large as possible.

150. Interviews and questionnaires as a data collection method

a. are more effective than observational techniques.
b. reveal only information the subject is willing to report.
c. cannot be considered to have validity.
d. provide no information about past behavior.

151. Direct-mail questionnaires have which of these factors most seriously reducing the validity of their "findings"?

a. history
b. regression
c. selection
d. instrumentation
e. reactive effects

152. Which of the following is usually the most serious limitation in the use of the mailed questionnaire in descriptive research?

a. defining a population
b. selecting a sample
c. obtaining responses
d. analyzing the data

153. Which one is <u>not</u> a characteristic of rating scales?

a. difficult to construct
b. subject to bias
c. easy to administer
d. measures remembered behavior

154. Which of the following techniques assumes that people will reveal some of their unconscious feelings and attitudes?

a. sociometric study
b. projective tests
c. questionnaires
d. interviews

Use the following key to indicate to which appraisal instrument each of the following statements best applies.

a. Inventories
b. Rating Scales
c. Tests
d. Sociometric Techniques
e. Projective Techniques

155. They provide data on the interaction among group members.

156. They ask an individual to supply information concerning his typical behavior.

157. They are most influenced by the "error of leniency."

158. Osgood's Semantic Differential technique uses

a. many concepts.
b. forced dichotomies.
c. 8 point scales.
d. bipolar adjectival scales.

159. When we divide children into English speaking and Spanish speaking groups, we are using

a. nominal scale.
b. ratio scale.
c. ordinal scale.
d. interval scale.

160. How does the interval scale differ from the ratio scale?

a. The interval scale has no absolute zero.
b. The interval scale has equal intervals.
c. The medians and percentiles can be computed.
d. The interval scale can be compounded.

T

Educational Program Management Center
Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

CRITERION-REFERENCED EXAMINATION

for

PROGRAM/PROJECT MANAGEMENT COMPONENT
July 6-10, 1970

HEW Institute
on

Planning for Decision Making in the '70's
University of New Hampshire
Durham, New Hampshire

This examination is not to be reproduced in whole or part without express permission of the Educational Program Management Center, College of Education, The Ohio State University.

( ) 1. What term best describes the primary or central role of a project manager?

1. coordinator
2. information generator
3. decision-maker
4. developer of products

( ) 2. What statement probably best characterizes a project?

1. Objectives are set within time, cost, and performance specifications.
2. Usually only a single objective is involved.
3. Projects are usually finite in character, complex in nature, consists of a unique series of tasks, and are generally a one-of-a-kind activity.
4. Project objectives once established eliminate the need for further planning.

( ) 3. What would be a descriptive title for an activity most likely defined as a project?

1. The Production of a Broadway Play
2. A Demographic Study of Handicapped Children in Franklin County
3. The Evolution of the Theory of Relativity
4. The U. S. Man on the Moon Program

( ) 4. Project manager authority lines are least clear in what type of project organization?

1. Vertical line
2. Horizontal line
3. Separate project organization
4. Project staff approach

( ) 5. What is generally recognized as the first step in the management process?

1. writing a proposal
2. personnel employment
3. bidding for projects
4. establishing objectives

( ) 6. What is the basic function of a management information system in a project?

1. communicate the decisions of the management to the performance levels of the project.
2. establish a data base for the planning stages of the project.
3. provide the manager with information relevant to the time, cost, and performance factors.
4. provide the manager with progress reports from all levels of the project.

( ) 7. Optimum program is a combination of the management of what three principal elements of information?

1. Planning, Controlling, Organizing
2. Cost, Time, Performance
3. Men, Material, Missions
4. Ideas, Actions, Results

( ) 8. Management by exception can be interpreted to mean a manager must study what types of problems?

1. All key issues brought to his attention.
2. Key deviations between the plan and execution.
3. Those presented by superiors without exceptions.
4. Problems of exceptional visibility.

( ) 9. What is the chief value in using the systems approach to define a project?

1. it establishes the hierarchical nature of the objectives.
2. it allows one to focus on limits or constraints in the environment.
3. it permits the use of the principles of disassembly and assembly.
4. all or none of the above.

( ) 10. What do we call the process of breaking down a system into interdependent parts?

1. System management
2. System synthesis
3. System analysis
4. System sequence

( ) 11. What major subsystems comprise the planning system?

1. reports, scheduling, project plan, management actions
2. decision implementation, time estimation, scheduling, project definition
3. project plan, project definition, time estimation, scheduling, cost/budget
4. time estimation, reports, project plan, decision implementation

( ) 12. What are the three major subsystems that comprise a control system?

1. reports, managements, decision implementation
2. time, cost, performance
3. project definition, network system, activities
4. tasks, activities, dummy activities

( ) 13. What is the chief product of the project definition phase of the planning system?

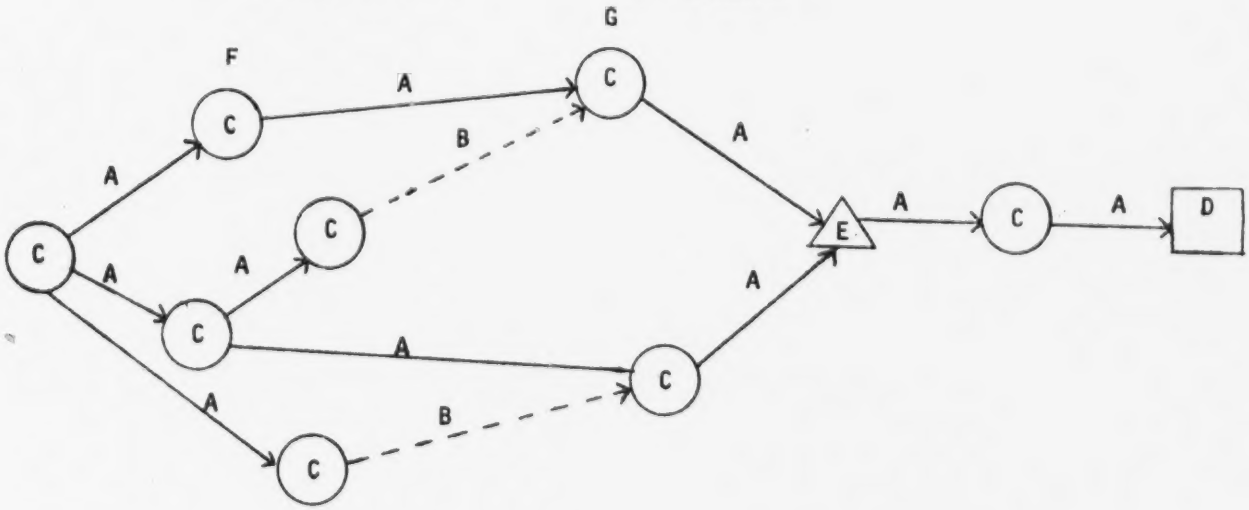
1. Personnel Assignments
2. Network Diagram
3. Work Breakdown Structure
4. Time Table of Events

( ) 14. What criterion is used for determining the number of levels necessary to define a project?

1. The finest detail possible
2. Skeletal breakdown
3. Necessary detail based on project manager's desires or wishes
4. Must always extend to five levels of breakdown

Using the following terms, identify the items on the illustration provided:

1. Activity
2. Constraint
3. Dependency
4. Dummy activity
5. Event
6. Interface
7. Milestone
8. Network



( ) 15. Letter A on the above diagram represents a

( ) 16. Letter B represents a

( ) 17. Letter C represents a

( ) 18. Letter D represents a

( ) 19. Letter E represents a

( ) 20. The term utilized to represent the effect that F has on G is

( ) 21. The term utilized to represent the effect that G has on F is

( ) 22. The entire diagram is a

( ) 23. Time estimates should be provided by what person on the project?

1. project manager
2. project writer
3. the person performing the task
4. an efficiency expert

( ) 24. How is scheduling defined?

1. action which adjusts operations to predetermined standards.
2. the translation of the plan developed from the previous steps in the planning process into a time table showing the specific calendar date for the start and completion of work.
3. a statement containing the major goal of the project, but also includes a recognition of limits and constraints important to the project.
4. the "organizational unit dedicated to the attainment of a goal--generally the successful completion of a development product on time within the budget, and in conformance with performance specification."

( ) 25. Which one of the following is probably the single most important factor in scheduling?

1. time
2. efficient utilization of personnel and facilities
3. availability of resources
4. accounting for overestimate abilities

( ) 26. Why are traditional budgeting and accounting practices generally not applicable to the project situation?

1. projects are non-continuous and are due to be totally consumed.
2. the traditional budgetary mechanism is too detailed and lacks flexibility.
3. educational budgets are based upon annual or biannual appropriations.
4. too many resource and personnel allocations are on a part-time basis.

( ) 27. What word would best typify the management approach contrast to the traditional approach to budgeting?

1. Inputs
2. Outputs
3. Charge number
4. Control

( ) 28. What is management control?

1. assuring that specific tasks are carried out effectively and efficiently.
2. collecting, manipulating, and transmitting information.
3. reporting financial information about the organization to the outside world.
4. assuring that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives.

( ) 29. Management report is one kind of device used to carry out the control function. What should such reports include?

1. brief comparison of actual progress against planned progress; improved situation resulted from previous corrective actions; and future status or progress of the project.
2. details of task completion which results in the present status of the project and prediction of future status.
3. detailed explanation of corrective actions recommended in order to complete all the tasks within the time frame.
4. resource shortage due to unexpected and/or uncontrolled circumstances.

( ) 30. What is the advantage of studying a model, such as the "generalized project management model," in a session on project management?

1. presents an ideal situation.
2. allows the student some freedom to speculate upon more useful activities.
3. presents a summary of the nature of tasks involved.
4. forces the project manager to fit his program to a simplified and useable framework.

Educational Program Management Center
Educational Development Faculty
College of Education
The Ohio State University
Columbus, Ohio 43210

Project Management Reaction Scale

Directions: On each page of this booklet you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.

If you feel that the concept at the top of the page is very closely related to one end of the scale, place your check mark as follows:

fair ___x___:_____:_____:_____:_____:_____:_____ unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extreme) you should place your check-mark as follows:

strong _____:___x___:_____:_____:_____:_____:_____ weak

If the concept seems only slightly related to one side as opposed to the other (but it is not really neutral), then you should check as follows:

active _____:_____:___x___:_____:_____:_____:_____ passive

If the concept is neutral, or the scale is irrelevant to the concept, then place your check mark in the middle space.

IMPORTANT: Place your check marks in the middle of spaces, not on boundaries.

Make each item a separate and independent judgement. Do not worry or puzzle over individual items. It is your first impression, the immediate feelings, about the items that we want.

PROJECT MANAGEMENT

beneficial	_____	: _____	: _____	: _____	: _____	: _____	: _____	harmful
sufficient	_____	: _____	: _____	: _____	: _____	: _____	: _____	insufficient
soothing	_____	: _____	: _____	: _____	: _____	: _____	: _____	aggravated
interpreted	_____	: _____	: _____	: _____	: _____	: _____	: _____	unexplained
useful	_____	: _____	: _____	: _____	: _____	: _____	: _____	useless
authentic	_____	: _____	: _____	: _____	: _____	: _____	: _____	facsimile
concise	_____	: _____	: _____	: _____	: _____	: _____	: _____	diffuse
constrained	_____	: _____	: _____	: _____	: _____	: _____	: _____	free
intentional	_____	: _____	: _____	: _____	: _____	: _____	: _____	unintentional
complex	_____	: _____	: _____	: _____	: _____	: _____	: _____	simple
stable	_____	: _____	: _____	: _____	: _____	: _____	: _____	changeable
rational	_____	: _____	: _____	: _____	: _____	: _____	: _____	intuitive

MANAGEMENT INFORMATION SYSTEMS

beneficial	_____	: _____	: _____	: _____	: _____	: _____	: _____	harmful
sufficient	_____	: _____	: _____	: _____	: _____	: _____	: _____	insufficient
soothing	_____	: _____	: _____	: _____	: _____	: _____	: _____	aggravated
interpreted	_____	: _____	: _____	: _____	: _____	: _____	: _____	unexplained
useful	_____	: _____	: _____	: _____	: _____	: _____	: _____	useless
authentic	_____	: _____	: _____	: _____	: _____	: _____	: _____	facsimile
concise	_____	: _____	: _____	: _____	: _____	: _____	: _____	diffuse
constrained	_____	: _____	: _____	: _____	: _____	: _____	: _____	free
intentional	_____	: _____	: _____	: _____	: _____	: _____	: _____	unintentional
complex	_____	: _____	: _____	: _____	: _____	: _____	: _____	simple
stable	_____	: _____	: _____	: _____	: _____	: _____	: _____	changeable
rational	_____	: _____	: _____	: _____	: _____	: _____	: _____	intuitive

PROGRAM EVALUATION AND REVIEW TECHNIQUE (PERT)

beneficial	____	: ____	: ____	: ____	: ____	: ____	: ____	harmful
sufficient	____	: ____	: ____	: ____	: ____	: ____	: ____	insufficient
soothing	____	: ____	: ____	: ____	: ____	: ____	: ____	aggravated
interpreted	____	: ____	: ____	: ____	: ____	: ____	: ____	unexplained
useful	____	: ____	: ____	: ____	: ____	: ____	: ____	useless
authentic	____	: ____	: ____	: ____	: ____	: ____	: ____	facsimile
concise	____	: ____	: ____	: ____	: ____	: ____	: ____	diffuse
constrained	____	: ____	: ____	: ____	: ____	: ____	: ____	free
intentional	____	: ____	: ____	: ____	: ____	: ____	: ____	unintentional
complex	____	: ____	: ____	: ____	: ____	: ____	: ____	simple
stable	____	: ____	: ____	: ____	: ____	: ____	: ____	changeable
rational	____	: ____	: ____	: ____	: ____	: ____	: ____	intuitive

PLANNING

beneficial	____	____	____	____	____	____	____	harmful
sufficient	____	____	____	____	____	____	____	insufficient
soothing	____	____	____	____	____	____	____	aggravated
interpreted	____	____	____	____	____	____	____	unexplained
useful	____	____	____	____	____	____	____	useless
authentic	____	____	____	____	____	____	____	facsimile
concise	____	____	____	____	____	____	____	diffuse
constrained	____	____	____	____	____	____	____	free
intentional	____	____	____	____	____	____	____	unintentional
complex	____	____	____	____	____	____	____	simple
stable	____	____	____	____	____	____	____	changeable
rational	____	____	____	____	____	____	____	intuitive

OBJECTIVES

neficial	____	____	____	____	____	____	____	harmful
fficient	____	____	____	____	____	____	____	insufficient
othing	____	____	____	____	____	____	____	aggravated
terpreted	____	____	____	____	____	____	____	unexplained
eful	____	____	____	____	____	____	____	useless
thentic	____	____	____	____	____	____	____	facsimile
ncise	____	____	____	____	____	____	____	diffuse
nstrained	____	____	____	____	____	____	____	free
tentional	____	____	____	____	____	____	____	unintentional
mplex	____	____	____	____	____	____	____	simple
able	____	____	____	____	____	____	____	changeable
tional	____	____	____	____	____	____	____	intuitive

SCHEDULES

beneficial	_____	_____	_____	_____	_____	_____	_____	harmful
sufficient	_____	_____	_____	_____	_____	_____	_____	insufficient
soothing	_____	_____	_____	_____	_____	_____	_____	aggravated
interpreted	_____	_____	_____	_____	_____	_____	_____	unexplained
useful	_____	_____	_____	_____	_____	_____	_____	useless
authentic	_____	_____	_____	_____	_____	_____	_____	facsimile
concise	_____	_____	_____	_____	_____	_____	_____	diffuse
constrained	_____	_____	_____	_____	_____	_____	_____	free
intentional	_____	_____	_____	_____	_____	_____	_____	unintentional
complex	_____	_____	_____	_____	_____	_____	_____	simple
stable	_____	_____	_____	_____	_____	_____	_____	changeable
rational	_____	_____	_____	_____	_____	_____	_____	intuitive

BUDGET

beneficial	____	____	____	____	____	____	____	harmful
sufficient	____	____	____	____	____	____	____	insufficient
soothing	____	____	____	____	____	____	____	aggravated
interpreted	____	____	____	____	____	____	____	unexplained
useful	____	____	____	____	____	____	____	useless
authentic	____	____	____	____	____	____	____	facsimile
concise	____	____	____	____	____	____	____	diffuse
constrained	____	____	____	____	____	____	____	free
ntentional	____	____	____	____	____	____	____	unintentional
omplex	____	____	____	____	____	____	____	simple
table	____	____	____	____	____	____	____	changeable
ational	____	____	____	____	____	____	____	intuitive

CONTROL

beneficial	_____	: _____	: _____	: _____	: _____	: _____	: _____	harmful
sufficient	_____	: _____	: _____	: _____	: _____	: _____	: _____	insufficient
soothing	_____	: _____	: _____	: _____	: _____	: _____	: _____	aggravated
interpreted	_____	: _____	: _____	: _____	: _____	: _____	: _____	unexplained
useful	_____	: _____	: _____	: _____	: _____	: _____	: _____	useless
authentic	_____	: _____	: _____	: _____	: _____	: _____	: _____	facsimile
concise	_____	: _____	: _____	: _____	: _____	: _____	: _____	diffuse
constrained	_____	: _____	: _____	: _____	: _____	: _____	: _____	free
intentional	_____	: _____	: _____	: _____	: _____	: _____	: _____	unintentional
complex	_____	: _____	: _____	: _____	: _____	: _____	: _____	simple
stable	_____	: _____	: _____	: _____	: _____	: _____	: _____	changeable
rational	_____	: _____	: _____	: _____	: _____	: _____	: _____	intuitive

DECISION-MAKING

beneficial	_____	: _____	: _____	: _____	: _____	: _____	: _____	harmful
sufficient	_____	: _____	: _____	: _____	: _____	: _____	: _____	insufficient
soothing	_____	: _____	: _____	: _____	: _____	: _____	: _____	aggravated
interpreted	_____	: _____	: _____	: _____	: _____	: _____	: _____	unexplained
useful	_____	: _____	: _____	: _____	: _____	: _____	: _____	useless
authentic	_____	: _____	: _____	: _____	: _____	: _____	: _____	facsimile
concise	_____	: _____	: _____	: _____	: _____	: _____	: _____	diffuse
constrained	_____	: _____	: _____	: _____	: _____	: _____	: _____	free
intentional	_____	: _____	: _____	: _____	: _____	: _____	: _____	unintentional
complex	_____	: _____	: _____	: _____	: _____	: _____	: _____	simple
stable	_____	: _____	: _____	: _____	: _____	: _____	: _____	changeable
rational	_____	: _____	: _____	: _____	: _____	: _____	: _____	intuitive

SIMTAR EXERCISE

beneficial	____	____	____	____	____	____	____	harmful
sufficient	____	____	____	____	____	____	____	insufficient
soothing	____	____	____	____	____	____	____	aggravated
interpreted	____	____	____	____	____	____	____	unexplained
useful	____	____	____	____	____	____	____	useless
authentic	____	____	____	____	____	____	____	facsimile
concise	____	____	____	____	____	____	____	diffuse
constrained	____	____	____	____	____	____	____	free
intentional	____	____	____	____	____	____	____	unintentional
complex	____	____	____	____	____	____	____	simple
stable	____	____	____	____	____	____	____	changeable
rational	____	____	____	____	____	____	____	intuitive

Elem. Form - A

THE VAN PIT SERIES - THINKING

FOR GRADES 4 - 5 AND 6

Your name here _____

Write your grade _____ Date _____ School _____

DIRECTIONS

Sometimes when we read something we think about it. Sometimes when we hear something we think about that, too. We ask ourselves, "Is it true?" Often we say, "That isn't true." At other times we can't make up our minds. We are uncertain.

We have some stories for you to read. After each story you will find some sentences. We would like to know what you think about them. **You don't have to believe the whole story.** You should think about the story and then think about each sentence. If you think the sentence is true, draw a circle around the "T"; if you think the sentence is false, draw a circle around the "F"; and if you can't tell whether it is true or false, draw a circle around the "?"

If you cannot read it or understand it, raise your hand and your teacher will help you to read the sentence. Make only one (1) circle for each sentence. Here is your chance to show how well you think.

Copyright applied for by
THE MODERN EDUCATION SERVICE
Box 26, Bronxville, N. Y.

THE FIRST STORY

Dorothy and her best friend, Sally, went for a hike in the woods. While they were walking along they saw a toad on the path. Sally stooped to pick it up. "Oh, don't touch it," said Dorothy, "My brother said that if I touched a toad I would get warts."

Draw a circle around **T**, if you think the sentence is true

Draw a circle around **F**, if you think the sentence is false

Draw a circle around **?**, if you can't tell if it is true or false

---

T	**F**	**?**	1.	Dorothy liked Sally.
T	**F**	**?**	2.	The sun was shining the day of the hike.
T	**F**	**?**	3.	Dorothy's brother got warts because he picked up a toad.
T	**F**	**?**	4.	Sally saw the toad in the tree.
T	**F**	**?**	5.	The girls took the toad home.
T	**F**	**?**	6.	Dorothy warned Sally not to touch the toad.
T	**F**	**?**	7.	They saw the toad while they were eating their lunch.
T	**F**	**?**	8.	Sally will have warts on her hands after handling the toad.

THE SECOND STORY

Sally and Dick were talking about Jane, who was in their room in school.

"Don't leave your lunch money around when Jane is there," said Dick.

"Why?" asked Sally.

"Well," said Dick, "her brother is in my sister's room. They caught him stealing things up there. If he is like that, then there must be something wrong with the whole family."

Draw a circle around **T**, if you think the sentence is true

Draw a circle around **F**, if you think the sentence is false

Draw a circle around **?**, if you can't tell if it is true or false

---

T	**F**	**?**	9.	Sally, Dick and Jane all went to the same school.
T	**F**	**?**	10.	Jane took Sally's lunch money.
T	**F**	**?**	11.	Jane's brother was caught taking money.
T	**F**	**?**	12.	Dick warned Sally about Jane.
T	**F**	**?**	13.	Sally and Dick were helping Jane.
T	**F**	**?**	14.	Sally always bought her lunch.
T	**F**	**?**	15.	Jane will take things too, because her brother takes things.
T	**F**	**?**	16.	Jane did not have very much money.

THE THIRD STORY

Harold and his friend, Tony, were standing on the corner of the street. Two men walked by. As they passed one man said, "Our navy lost over 5000 men in this last battle in the Pacific. They say that we won't have enough boats or men to take the place of those we have lost."

"Gee," said Harold. "It looks pretty bad for us."

"Oh, I don't know," said Tony. "Last week I heard that we had sunk more than sixty enemy ships."

Draw a circle around **T,** if you think the sentence is true

Draw a circle around **F,** if you think the sentence is false

Draw a circle around **?,** if you can't tell if it is true or false

---

T	**F**	**?**	17.	The men who passed were talking very loudly.
T	**F**	**?**	18.	The navy lost the battle the men were talking about.
T	**F**	**?**	19.	The boys were frightened by what the men said.
T	**F**	**?**	20.	It is possible that the two men were spies.
T	**F**	**?**	21.	The United States navy sank more ships than the enemy.
T	**F**	**?**	22.	This battle in the Pacific Ocean was the last battle in the war.
T	**F**	**?**	23.	The boys were waiting for the bus when they heard the conversation.
T	**F**	**?**	24.	The two boys said just about the same thing.

THE FOURTH STORY

At Scott School there is a fine ball team. This school won the championship last year. Steve goes to Scott and his friend Jack goes to Jefferson which does not have a very good team.

"Scott is a better school than Jefferson," said Steve one day.

"I don't think so," replied Jack. "I like our school."

"Ours is the best because we won the championship, didn't we? Your team is terrible," answered Steve.

Draw a circle around **T,** if you think the sentence is true

Draw a circle around **F,** if you think the sentence is false

Draw a circle around **?,** if you can't tell if it is true or false

---

T	**F**	**?**	25.	Scott won every game they played last year.
T	**F**	**?**	26.	You would learn to be a good sport if you went to Scott.
T	**F**	**?**	27.	Scott will beat Jefferson this year.
T	**F**	**?**	28.	Jack thinks his school is a good school.
T	**F**	**?**	29.	The Jefferson team is terrible.
T	**F**	**?**	30.	Scott is the finest school in town.
T	**F**	**?**	31.	Scott will beat Jefferson because they have a finer school.
T	**F**	**?**	32.	Jack would like to have Jefferson win the championship.

THE FIFTH STORY

While walking to school one day, Fred said to Jim, "I don't think that those fellows at the Johnson factory have a right to strike."

"But my father works there and he says that they have. They don't pay them enough," answered Jim.

"You're all wrong," said Fred. "I read in the newspaper about the whole thing and it said that they were paid enough."

Draw a circle around **T**, if you think the sentence is true
Draw a circle around **F**, if you think the sentence is false
Draw a circle around **?**, if you can't tell if it is true or false

T	**F**	**?**	33.	The boys did not agree about the strike.
T	**F**	**?**	34.	You should believe Jim's father before you believe the newspaper.
T	**F**	**?**	35.	Listening to both boys, you can be sure that each one was doing his own thinking.
T	**F**	**?**	36.	It is never right for men to strike during wartime.
T	**F**	**?**	37.	Jim's father wanted the men to win the strike.
T	**F**	**?**	38.	If it was in the newspaper, then it must be true.
T	**F**	**?**	39.	Fred's father does not work in the factory.
T	**F**	**?**	40.	Jim doesn't believe what he reads in the newspapers.

THE SIXTH STORY

There are twenty children in the fourth grade. The children in the fourth grade drink milk at school every day at noon. There are four glasses of milk in each quart. This tells how many quarts of milk this class drank every day last week.

MONDAY	**TUESDAY**	**WEDNESDAY**	**THURSDAY**	**FRIDAY**
5 Quarts	4 Quarts	10 Quarts	3 Quarts	6 Quarts

Draw a circle around **T**, if you think the sentence is true
Draw a circle around **F**, if you think the sentence is false
Draw a circle around **?**, if you can't tell if it is true or false

T	**F**	**?**	41.	Each student in the class drank two glasses of milk on Wednesday.
T	**F**	**?**	42.	Every child drank twice as much milk in class on Wednesday as on Monday.
T	**F**	**?**	43.	On Thursday some of the children in the class did not want any milk.
T	**F**	**?**	44.	There was enough milk for every child in the class to have a glassful on Tuesday.
T	**F**	**?**	45.	On Thursday and Friday the children drank more milk in school than they did on Monday and Tuesday.
T	**F**	**?**	46.	Four children did not get any milk on Tuesday.
T	**F**	**?**	47.	The children did not want much milk on Thursday because they had had a lot on Wednesday.
T	**F**	**?**	48.	Some children had two full glasses of milk in school on Friday.

Name _____ School _____ Date _____

CRITICAL THINKING TEST

Ethel Wildey Maw

Directions: This is a test to see how well you can judge statements based upon facts which are presented to you. In some cases, you can tell from the facts given that a statement is false or true. In other cases, you can say that the statement is probably true or false because the facts suggest this but do not make it certain. There are still other cases where you are not given enough facts to make it possible for you to say anything about the truth or falsity of the statement.

If you can tell from the facts given that a statement is true, mark T with an X.

If you can tell from the facts given that a statement is false, mark F with an X.

If he facts suggest that a statement is true but do not make it certain, it is probably true. Mark PT with an X.

If the facts suggest that a statement is false but do not make it certain, it is probably false. Mark PF with an X.

If there are not enough facts given to make it possible for you to say anything about the truth or falsity of the statement, mark NE with an X.

The meaning of T, PT, NE, PF and F will be shown at the top of each page of the test.

Example: A brother and sister raised tulips to enter in the annual flower show. Some bulbs were planted in loam and some in clay. The tulips were tended with care and all bloomed in time for the flower show. The tulips which had grown in loam won the prize.

~~T~~ PT NE PF F 1. The flower show was held once each year.
(True. The paragraph tells that it was an annual flower show.)

T ~~PT~~ NE PF F 2. Plants grow well in loam.
(Probably true. The paragraph tells that tulips grew well in loam. It does not tell about other plants. But since tulips are plants, what is true of tulips is probably true of other plants as well.)

T PT NE PF ~~F~~ 3. All of the bulbs were planted in loam.
(False. The paragraph tells that some bulbs were planted in clay.)

T PT ~~NE~~ PF F 4. Tulips grow better in loam than in any other kind of soil.
(Not enough facts given. The paragraph tells about only two kinds of soil, loam and clay. It does not tell about other kinds of soil.)

T PT NE ~~PF~~ F 5. If the brother and sister raise tulips next year, they will not plant any in loam.
(Probably false. The paragraph tells that the tulips which grew in loam won the prize. We would judge from this that they would probably try loam again.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

T True according to the facts given.
PT Probably true from the facts given.
NE Not enough facts given.
PF Probably false from the facts given.
F False according to the facts given.

PROBLEM I

Although your chance of being struck by lightning is very,very small, this small chance is something to think about. If you are out in the open when a thunder storm begins, you should stay away from trees, high places, and wire fences, because these are in greatest danger of being struck by lightning. If there is a building near, go inside to keep dry.

T PT NE PF F 1. You will not be struck by lightning if you stay inside a building during thunder storms.

T PT NE PF F 2. A tree on top of a hill is more likely to be struck by lightning than a tree in a valley.

T PT NE PF F 3. Within your whole lifetime you will not be struck by lightning.

T PT NE PF F 4. If there is no building near when a thunder storm begins, you should go under a tree to keep dry.

T PT NE PF F 5. A farmer would not leave a cow tied to a wire fence during a thunder storm.

T PT NE PF F 6. Lightning never strikes twice in the same place.

T PT NE PF F 7. Lightning will strike whom it will, and there is nothing that can be done about it.

PROBLEM II

Long before the other people of the world learned how to use rubber, the American Indians were making things out of it. On one of his trips to America, Columbus saw Indians playing games with rubber balls. The Indians also made water jars and shoes from rubber.

T PT NE PF F 8. We do not know when the Indians first began to use rubber

T PT NE PF F 9. The Ind ans made no important discoveries.

T PT NE PF F 10. People have been using rubber for more than 400 years.

T PT NE PF F 11. The first thing made from rubber was a rubber ball.

T PT NE PF F 12. Columbus was not interested in the rubber balls the Indians were playing with.

T True PT Probably true NE Not enough facts given
PF Probably false F False

PROBLEM III

A number of years ago, it was discovered that bread made from white flour did not contain the vitamins, minerals, and proteins that were in whole wheat bread. Many people still used white bread, because they had become used to the taste of it. However, some of the minerals and vitamins are added to white flour so people can have white bread if they want it and still get many of the same food values they would get from whole wheat bread.

T PT NE PF F 13. Old habits are not easy to break.

T PT NE PF F 14. White flour now contains all of the food values of whole wheat flour.

T PT NE PF F 15. Whole wheat bread is more healthful than white bread.

T PT NE PF F 16. Science can solve all of our food problems.

T PT NE PF F 17. Now that we have enriched white bread, fewer loaves of whole wheat bread are sold.

T PT NE PF F 18. People who like white bread are not pleased to have vitamins and minerals added to it.

PROBLEM IV

Since the last ice age there have been cycles of warmer and colder climates. The cycles are thought to be caused by changes in the amount of carbon dioxide in the air. Scientists are trying to find out what climate was like at different times in the past by studying the air which is trapped in the ice of glaciers. They are studying the air in the huge ice sheets of Greenland where some of the ice may be 20,000 years old or more. They have found that the amount of carbon dioxide in the air of some layers is twice as much as in present-day air.

T PT NE PF F 19. The climate of a region does not always stay the same.

T PT NE PF F 20. Scientists will learn what the climate of Greenland was like 5,000 years ago.

T PT NE PF F 21. When there is more carbon dioxide in the air, the climate is colder.

T PT NE PF F 22. The scientists fear that the ice sheets of Greenland will be gone before they can finish their study.

T PT NE PF F 23. Some of the ice now in Greenland was there when Columbus discovered America.

T PT NE PF F 24. At one time Greenland was as warm as Florida is now.

T True
PT Probably true
NE Not enough facts given
PF Probably false
F False

PROBLEM V

People studying human growth found that a large group of American-born Japanese children in California grew at the same rate as a large group of other American children living in a wealthy neighborhood in Ohio. They also found that the American-born Japanese children grew at a faster rate than a large group of Japanese children living in Japan. When the diets of the three groups of children were studied, it was found that the children living in America had more and better food than the children living in Japan.

T PT NE PF F 25. Good food is important to growth.

T PT NE PF F 26. The Japanese children in Japan grew more slowly than the American-born Japanese children.

T PT NE PF F 27. The climate of California is more healthful than the climate of Ohio.

T PT NE PF F 28. By nature, Japanese people grow more slowly than people of other races.

T PT NE PF F 29. If the children living in Japan had been born and reared in America, they would have grown as fast as the American-born children.

T PT NE PF F 30. The wealthy Ohio children had been spoiled by soft living.

T PT NE PF F 31. Some of the differences between people of different countries are caused by differences in diets.

PROBLEM VI

Susan Hall wanted to do well on the spelling test she would have on Friday. She had not done well on her spelling tests in the past. Her mother said, "Why not do some studying each evening instead of waiting to do all of your studying on Thursday evening?" Each evening that week, Susan studied spelling. On Friday she made a perfect score on the spelling test.

T PT NE PF F 32. More can be learned by studying at home than by studying at school.

T PT NE PF F 33. From then on Susan tried to do some studying each day instead of waiting until just before the test.

T PT NE PF F 34. People who do some studying each day do not learn well.

T PT NE PF F 35. Spelling is not well taught in most schools.

T PT NE PF F 36. Patient work brings its reward.

T PT NE PF F 37. Susan was sorry she had wasted so much time in study.

T True
PT Probably true
NE Not enough facts given
PF Probably false
F False

PROBLEM VII

Cement has been used for building for thousands of years. Romans of long ago used it for making roads and walls of buildings. Many of the walls are still standing and some of the roads made by the Romans 2000 years ago are still used today.

Wear, weather, and changing temperatures are hard on cement, yet well-made cement can last for ages.

T PT NE PF F 38. Some of the old Roman roads are still in use.

T PT NE PF F 39. If the winters of Rome were more severe, the cement roads would not have lasted so well.

T PT NE PF F 40. The oldest things are the best.

T PT NE PF F 41. Some important Roman roads were not used for centuries.

T PT NE PF F 42. The Romans have never been thought to be good builders.

T PT NE PF F 43. Cement was discovered by an American scientist.

T PT NE PF F 44. Some of the Roman roads have been in use for more than 2000 years.

PROBLEM VIII

Farmers have found an inexpensive way of getting rid of some of the caterpillars that eat their crops. There are small flying insects which lay their eggs inside the bodies of the caterpillars. If early in the season the farms allow the caterpillars to live on their crops, the young insects living inside the caterpillars will soon grow up and cut their way out of the caterpillars' bodies. In doing this they kill the caterpillars. The new flying insects will then lay their eggs in other caterpillars. In this way, many caterpillars are killed at little cost to the farmers.

T PT NE PF F 45. It would be cheaper for the farmers to poison the caterpillars than to let them eat the crops even for a short time.

T PT NE PF F 46. Insects are enemies of mankind.

T PT NE PF F 47. If the farmers kill the early caterpillars, there will be fewer flying insects later in the season.

T PT NE PF F 48. When people destroy living things, they upset the balance of nature.

GO RIGHT ON

T	True
PT	Probably true
NE	Not enough facts given
PF	Probably false
F	False

For many hundreds of years people made paper by hand from cotton and linen rags. Then in 1789, a Frenchman named Louis Robert invented a paper machine. Wherever these machines were set up, rags were quickly turned into paper and soon there was a shortage of rags.

Frederic Keller, a German, remembered that a French scientist had suggested making paper from wood as wasps do. After watching wasps make paper from bits of wood, he and a friend tried it and finally found a way to make paper from wood pulp. This solved the rag shortage, but soon there was another shortage -- a shortage of trees.

T PT NE PF F 49. Keller was not successful the first time he tried to make paper from wood.

T PT NE PF F 50. The French are better scientists than the Germans.

T PT NE PF F 51. Many trees were cut down to supply wood pulp for making paper.

T PT NE PF F 52. Most of the paper which is used today is made from rags.

T PT NE PF F 53. The shortage of rags for paper was worse in Germany than in other countries of Europe.

T PT NE PF F 54. People can learn from studying other creatures.

T PT NE PF F 55. The Germans are good observers of nature.

PROBLEM X

There are many kinds of storms. Some storms are destructive, but most storms are very useful. They help to circulate the air. They bring rain. They clear the air of dirt, soot, and smoke.

T PT NE PF F 56. Some storms do great damage.

T PT NE PF F 57. There is some good in every evil.

T PT NE PF F 58. Storms are more often destructive than useful.

T PT NE PF F 59. The next storm to pass through your neighborhood will be a destructive one.

T PT NE PF F 60. If it weren't for storms, this world would not be such a pleasant place to live.

T True
PT Probably true
NE Not enough facts given
PF Probably false
F False

PROBLEM XI

There is more carbon in hard coal than in soft coal. Hard coal burns with almost no smoke and leaves very few ashes. Soft coal makes a lot of smoke and soot when it burns. Many large factories burn soft coal because it is cheap and plentiful.

T PT NE PF F 61. People like to live near factories that burn soft coal.

T PT NE PF F 62. The more carbon there is in coal, the more smoke it makes when it burns.

T PT NE PF F 63. Factory owners care nothing about the health of the people who live near the factories.

T PT NE PF F 64. Factory owners would like to use hard coal.

T PT NE PF F 65. Soft coal is cheaper than hard coal.

PROBLEM XII

The corn plant bears seeds in the middle of the stalk, while other cereals bear seeds at the tip. Since the middle of the stalk is thicker and stronger than the tip, it can hold the weight of a larger ear. From this we would think that corn might produce more than other cereals. It is well known that record yields of wheat are not likely to be more than 100 bushels per acre, while record yields of corn are more than 300 bushes per acre.

The earliest corn plants bore their seeds at the tip of the stalk. When the place of bearing the seeds was changed, the corn plant became more useful to people. At the same time, the corn plant became less able to scatter the seeds. It is therefore less able to live in a wild state.

T PT NE PF F 66. All cereals bear their seeds at the tip of their stalk.

T PT NE PF F 67. Farmers who raise corn make about three times as much profit asFarmers who raise wheat.

T PT NE PF F 68. Next year the record yield of wheat in bushels per acre will be greater than the record yield of corn.

T PT NE PF F 69. If corn were no longer raised by people, it would grow well in a wild state.

T PT NE PF F 70. Corn plants now look very different from the earliest corn plants.

T PT NE PF F 71. Corn plants now are more productive than earlier corn.

GO RIGHT ON

T True
PT Probably true
NE Not enough facts given
PF Probably false
F False

PROBLEM XIII

Hobbies sometimes lead to discoveries. For example, Leeuwenhook who lived in Holland about 300 years ago, had the hobby of grinding and polishing pieces of glass into magnifying lenses. He worked so carefully that his lenses were stronger than any that had been made before. He looked at everything he could get hold of with his new lenses. One day he placed a drop of pond water under his lenses. To his great surprise, he found that it was filled with tiny plants and animals. He had discovered a new world of living things that had never been seen before.

T PT NE PF F 72. Leeuwenhook was the first person to see the tiny living things in pond water.

T PT NE PF F 73. Every person should have at least one hobby.

T PT NE PF F 74. Leeuwenhook looked at a drop of blood with his new lenses.

T PT NE PF F 75. Leeuwenhook's lenses were almost as good as those he could have bought in the finest shops.

T PT NE PF F 76. Important discoveries are most often made by chance.

T PT NE PF F 77. Soon after his discovery, Leeuwenhook lost interest in his lenses.

T PT NE PF F 78. Leeuwenhook made the first magnifying lenses.

PROBLEM XIV

Each year there are many more people living on this earth than there were the year before. This has led to the fear that there will soon not be enough food to go around. In some countries, there is a shortage of food at the present time. Foods that supply proteins and vitamins are the ones that are most likely to be scarce. Since these foods are very important to the health of children, several groups in the United Nations have been trying to find ways to supply them cheaply in places where they are needed. One of the most important findings made by these groups is that vegetable proteins can be used in place of animal proteins in children's diets.

T PT NE PF F 79. Vegetable proteins cost less than animal proteins

T PT NE PF F 80. Proteins and vitamins are not important to grownups.

T PT NE PF F 81. The population of the world is increasing rapidly.
T PT NE PF F 82. Animal proteins are not necessary to the health of children.
T PT NE PF F 83. We should take care of present needs and not trouble ourselves about the future.

T PT NE PF F 84. There is no reason to believe that there will ever be a shortage of food on this earth.

SELF-REPORT OF KNOWLEDGE INVENTORY

5-Digit Code

Please circle the code number which best describes your level of understanding of each of the topics below.

Code	Interpretation
1	Excellent understanding
2	Good understanding
3	Some understanding
4	Little understanding
5	No understanding

Topic	Excellent	Good	Some	Little	None
1. Criteria for evaluating an evaluation	1	2	3	4	5
2. Symptoms of evaluation's illness	1	2	3	4	5
3. Definition of evaluation	1	2	3	4	5
4. The decision-making process	1	2	3	4	5
5. Types of decisions	1	2	3	4	5
6. The role of values in evaluation	1	2	3	4	5
7. Multi-level evaluation	1	2	3	4	5
8. Evaluation methodology	1	2	3	4	5
9. The CIPP model for evaluation	1	2	3	4	5
10. The implementation of a strategy for evaluation	1	2	3	4	5
11. Roles of the evaluator	1	2	3	4	5

CIRCE Attitude Scale No. 1.4

Name

Attitudes toward Educational Evaluation. Below are a number of statements about the evaluation of educational programs. A program can be a lesson, a course, a whole curriculum, or any training activity. Consider each statement as a statement of opinion. If you agree at least a little bit with the statement, circle the letter A. If you disagree even a little bit with the statement, circle the letter D. If you both agree and disagree, or if you have no opinion, leave the letters uncircled.

A AGREE D DISAGREE Blank Neither

1. A D The major purpose of an educational evaluation study should be to gather information that will be helpful to the educators.
2. A D It is important for the program evaluator to find out how well various people like the program.
3. A D Generally speaking, an educational program should be evaluated with reference to one or more "control" programs.
4. A D The evaluator should accept the responsibility of finding the strongest, most defensible, and publicly attractive points of the program.
5. A D In evaluating a program, it is at least as important to study and report on the types of teaching as it is to study and report on the amount of learning.
6. A D The evaluator should draw a conclusion as to whether or not the goals of the program are worthwhile.
7. A D It is more important to evaluate a program in comparison to what other programs do than to evaluate it with reference to what its objectives say it should do.
8. A D Principals and superintendents should not gather data about the quality of instruction in the classroom.
9. A D The task of putting educational objectives into writing is more the responsibility of the evaluator than that of the educator.
10. A D It is essential that the full array of educational objectives be stated before the program begins.
11. A D Evaluation studies would improve if they gathered more kinds of information, even if at the expense of gathering less reliable information.
12. A D Evaluators should ignore data that cannot be objectively verified.
13. A D Education should have more of an engineering orientation than it now has.
14. A D The job of an evaluator is mostly one of finding out how well students learn what they are supposed to learn.
15. A D Evaluation should aid an educator in revising his goals even while the program is in progress.
16. A D The process of decision-making about the curriculum is one of the weakest links in the present operation of the schools.
17. A D Educators have some important aims that cannot be stated adequately by anyone in terms of student behaviors.
18. A D Information from an evaluation study is not worth the trouble it makes.
19. A D The first job in instruction is the formulation of a statement of objectives.
20. A D A teacher should tell his students any and all of his teaching objectives.
21. A D The major purpose of educational evaluation is to find out the worth of what is happening.
22. A D The evaluator should be a facilitator more than a critic or reformer or scholar.
23. A D Some school experiences are desirable because they round out a child's life—whether or not they increase his competence or change his attitudes.

Please turn over

24. A D An evaluator should find out if the teaching is in fact the kind that the school faculty expects it to be.

25. A D Whether or not an evaluation report is any good should be decided pretty much on the same grounds that research journal editors use to decide whether or not a manuscript should be published.

26. A D The **main** purpose of evaluation is to gain understanding of the causes of good instruction.

27. A D Description and value judgment are equally important components of evaluation.

28. A D In conducting an evaluation, there is no justification for the exercise of subjective judgment of any kind by the evaluator.

29. A D Educational evaluation is a necessary step in the everyday operation of the school.

30. A D The strategy of evaluation should be chosen primarily in terms of the particular needs the sponsors have for evaluation data.

31. A D The educational evaluator should attempt to conceal all of his personal judgment of the worth of the program he is evaluating.

32. A D The sponsor of an evaluation should have the final say-so in choosing or eliminating variables to be studied.

33. A D The main purpose of educational evaluation is to find out what methods of instruction work for different learning situations.

34. A D Parents' attitudes should be measured as part of the evaluation of school programs.

35. A D An evaluator finds it almost impossible to do his job without intruding upon the operation of the program at least a little.

36. A D All important educational aims can be expressed in terms of student behaviors.

37. A D Some educational goals are best expressed in terms of teacher behaviors.

38. A D It is essential that evaluation studies be designed so that the findings are generalizable to other curricula.

39. A D An evaluation study should pay less attention to the statistical significance of a finding than an instructional research study would.

40. A D Evaluation interferes with the running of schools more than it helps.

41. A D Little evaluation planning can be done before you get a statement of instructional objectives.

42. A D The leader of an evaluation team should be a teacher.

43. A D The entire school day and the entire school experience should be divided up and assigned to the pursuit of stated educational goals.

44. A D An evaluation of an educational program should **include** a critical analysis of the value of the goals of the program.

45. A D Every teacher should have formal ways of gathering information about the strengths and shortcomings of his instructional program.

46. A D Money spent on evaluation contributes more to the improvement of education than any other expenditure.

47. A D There just is no way that careful and honest evaluation can hurt a school program.

48. A D If an evaluation study is well designed, the primary findings are likely to improve decisions made by administrators, teachers, and students themselves.

49. A D When the evaluator has to choose between helping this staff run its program better and helping educators everywhere understand all programs a little better he should choose the latter.

INSTITUTE PARTICIPANT OPINIONNAIRE

CIRCE
Summer 1970

5-DIGIT CODE

DIRECTIONS: The following items have been written to enable you to say how you feel about several aspects of an instructional week of your Institute. Check one response category for each question and comment if you wish to clarify your response.

Select any 5-digit code number and use it throughout the Institute on these opinionnaires.

	Yes	Yes-"but"	No	I don't know
1. Are you enjoying yourself at this Institute?	☐	☐	☐	☐
Comment: _____				
2. Are you getting the chance to talk to the staff as much as you would like to?	☐	☐	☐	☐
Comment: _____				
3. In your opinion, is the entire Institute well-organized?	☐	☐	☐	☐
Comment: _____				
4. Has the general administration of this past week been well-organized?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
5. Have you been getting along well with other participants at the Institute?	☐	☐	☐	☐
Comment: _____				
6. Did you enjoy the instructional staff for this week?	☐	☐	☐	☐
Comment: _____				
7. Do you feel you learned a lot this week?	☐	☐	☐	☐
Comment: _____				
8. Is the Institute paying enough attention to your important problems?	☐	☐	☐	☐
Comment: _____				
9. Would your professional peers back home be interested in what you learned this week?	☐	☐	☐	☐
Comment: _____				
10. Do you think you could teach another group what you have learned this week?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
11. Is the Institute meeting your personal expectations for it?	☐	☐	☐	☐
Comment: _____				
12. Have the staff failed to change or correct certain matters that were brought to their attention?	☐	☐	☐	☐
Comment: _____				
13. Are you getting the chance to study as much as you would like to?	☐	☐	☐	☐
Comment: _____				
14. Are you getting sufficient opportunity to socialize and recreate?	☐	☐	☐	☐
Comment: _____				
15. Was the content for this week challenging and important?	☐	☐	☐	☐
Comment: _____				
16. Are you working hard enough?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
17. Did this week "hang together" as an instructional whole for you?	☐	☐	☐	☐
Comment: _____				
18. Would you want to teach another group what you have learned this week?	☐	☐	☐	☐
Comment: _____				
19. Should the presentation for this week have been preceded with more readings, discussion, background materials?	☐	☐	☐	☐
Comment: _____				
20. Would you recommend including all or part of this week in a package to be used in summer institutes elsewhere?	☐	☐	☐	☐
Comment: _____				

21. If you have a message for the people running this Institute, please write it here:

_____

_____

_____

_____

_____

SUMMARY OPINIONNAIRE

CIRCE
Summer 1970

5-DIGIT CODE

DIRECTIONS: Throughout this Institute you have told us how you feel about a number of aspects of the instructional program of this Institute. Now we are asking for some OVERALL reactions. Check one response category for each item, and comment if you wish to clarify your response.

Please use the same 5-digit code on this Opinionnaire that you have been using throughout the Institute.

1. To what extent do you feel the following objectives were achieved:

	Very Well	Fairly Well	Mini-mally	Not At All
a. An understanding of the problems inherent in the management of an educational evaluation project.	☐	☐	☐	☐
b. A knowledge of methods and procedures for evaluating those curriculum changes with which you as an Institute participant are concerned.	☐	☐	☐	☐
c. An awareness of the major alternatives available in terms of educational research methodologies.	☐	☐	☐	☐
d. An understanding of the relationship of evaluation to the problems associated with the development, dissemination, and adoption process in educational innovation.	☐	☐	☐	☐
e. A familiarity with communications techniques applicable to proper implementation of the decision-making process at various levels of the educational system.	☐	☐	☐	☐

2. You probably had some personal objectives which were not the same as those of the Institute. If so, would you indicate below (briefly, please) what they were and how well they were achieved.

	Very Well	Fairly Well	Mini-mally	Not At All
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

3. For each of the four major sections of this Institute, indicate whether time allocated was too little, about right, or too much:

	Too Little	About Right	Too Much
a. Cook: One week was--	☐	☐	☐
b. Walbesser: Two weeks was--	☐	☐	☐
c. Stufflebeam: Two weeks was--	☐	☐	☐
d. Asher: One week was--	☐	☐	☐

4. For each of the four major sections of the Institute, indicate by checking the appropriate box the extent to which you think the material presented during that section was relevant to your own activities or concerns:

	Very Relevant	Somewhat Relevant	Slightly Relevant	Not Relevant
a. Section One (Cook)	☐	☐	☐	☐
b. Section Two (Walbesser)	☐	☐	☐	☐
c. Section Three (Stufflebeam)	☐	☐	☐	☐
d. Section Four (Asher)	☐	☐	☐	☐

For the following items, please mark the appropriate box, using these alternatives:

SA = strongly agree
A = agree
U = undecided
D = disagree
SD = strongly disagree

5. The content of this Institute has direct practical utility in my institution. SA ☐ A ☐ U ☐ D ☐ SD ☐

Comment: _____

_____

_____

6. In general, the approaches presented here are not feasible in my institution. SA ☐ A ☐ U ☐ D ☐ SD ☐

Comment: _____

_____

_____

7. The benefit I derived from the Institute was not worth my expenditure of time.

SA	A	U	D	SD
☐	☐	☐	☐	☐

Comment: _____

_____

_____

8. This Institute compared favorably, overall, with other institutes I have attended.

SA	A	U	D	SD	Does Not Apply
☐	☐	☐	☐	☐	☐

Comment: _____

_____

_____

9. The diversity in content and approach presented by the consultants was:

a. Appropriate to the objectives of the Institute.

SA	A	U	D	SD
☐	☐	☐	☐	☐

Comment: _____

_____

_____

b. Satisfactory to me personally.

SA	A	U	D	SD
☐	☐	☐	☐	☐

Comment _____

_____

_____

c. Too great for me to be able to assimilate and integrate things as well as I would have liked.

SA	A	U	D	SD
☐	☐	☐	☐	☐

Comment: _____

_____

_____

10. If this Institute were to be offered again, I would recommend to others like myself that they attend it. SA ☐ A ☐ U ☐ D ☐ SD ☐

Comment: _____

_____

_____

11. Consultants were generally not available for questions and discussion outside of the times scheduled for formal presentations. SA ☐ A ☐ U ☐ D ☐ SD ☐

Comment: _____

_____

_____

12. After participating in the Institute, I feel more competent:

a. To approach and conduct evaluation studies SA ☐ A ☐ U ☐ D ☐ SD ☐

b. To design and carry out research projects SA ☐ A ☐ U ☐ D ☐ SD ☐

c. To develop and implement sound decision-making strategies. SA ☐ A ☐ U ☐ D ☐ SD ☐

13. For each of the following descriptive statements, indicate by checking the appropriate box(es) which of the sections of the Institute it applies to. The following code is used for the column headings:

(1) = Project management models and techniques (Cook)

(2) = Behavioral objectives, design of assessment tasks, and construction of learning sequences (Walbesser et al.)

(3) = Evaluation models and techniques, seminars on problematic simulations (Stufflebeam, Guba, and Hammond)

(4) = Problems associated with developing, disseminating, and adopting educational innovations (Asher and Heisley)

	(1)	(2)	(3)	(4)
a. This material could have considerable applicability to my work at my own institution.				
b. I really don't see how this could apply to the problems with which I have to work.				
c. It's likely that I will be able to put this to good use.				
d. I don't see how this material could be included in another Institute in the absence of the consultant(s) who presented it here.				
e. This material would be readily transferrable to other Institutes as an instructional package, without requiring that the consultant(s) who presented it here be involved.				
f. I would recommend that my colleagues attend a Workshop or Institute which had this topic as its central focus.				

14. How would you describe each of the following aspects of the Institute? (Please check the appropriate response.)

	Excellent	O.K.	Undecided	Inadequate	Poor
Facilities					
Time schedule					
Budget					
Format					
Materials					
Equipment					
Staff (Al Elwell, Mo Oliver, Ev Barnes)					
Consultants					
Participant Observers (Charles Williamson, Stuart Pickard)					
Participants					
Food					

15. Which of the following best describes your overall reaction to the Institute?

Very Favorable	Favorable	Undecided	Unfavorable	Very Unfavorable
☐	☐	☐	☐	☐

16. A six-week time allocation for an Institute like this one is:

Much too long	A little too long	About right	A little too short	Much too short
☐	☐	☐	☐	☐

17. Do you have any message for the staff, consultants, or evaluators of this Institute?

PARTICIPANT OBSERVER'S DAILY LOG NHUI

I. Facilitators:

events, people, decisions--
Arrangements that had a positive effect on some facet of the Institute.

II. Inhibitors:

events, people, decisions--
Arrangements that had a negative effect on some facet of the Institute.

III. Participants' quotes:

Quotable quotes that reveal participants' views, goals, satisfactions, disappointments, etc.

IV. Human Relations:

Especially along the dimensions of age, sex, race, and lodging location.

Interviewee

Institute

Date

Interviewer

INSTITUTE STAFF SITE-VISIT
INTERVIEW FORM

*Greatest strength:

*Greatest weakness:

*Problems solved:

*Problems persisting:

*Principal intent of UNHI:

*Freebee:

H.E.W. RESEARCH INSTITUTE

Self-Assessment Profile

"No one, not even an expert, should evaluate the work of someone else. In fact, the teacher should not evaluate the work of the students; they should do the evaluating themselves. If not, why emphasize the objective of self-direction, which obviously includes the process of evaluating one's performance in the light of goals that have been self-determined? The evaluation function of the teacher is to provide situations whereby the students are led to evaluate their own procedures in the light of criteria they themselves have formulated."

The present self-assessment function and associated profile provide a situation whereby you are being asked to evaluate your professional growth in the light of criteria you yourself have formulated as a participant in the 1970 USOE Title IV HEW Research Institute. Several probable criteria of professional growth could perhaps have been identified for you by the Institute staff, consultants, or evaluators but "not even an expert should evaluate the work of someone else." For each of the factors that you identify please narrate your self-assessment of professional growth. Finally, assign yourself an overall "academic grade" for the two courses in which a formal assessment must be reported for the convenience of the University Registrar (the UNH grading system description card is attached for your interpretive needs).

Criterion A: _____

_____

_____

_____

_____

Criterion B: _____

_____

_____

_____

_____

Criterion C: _____

_____

_____

_____

_____

FORMAL ACADEMIC GRADE EVALUATION

* Education 881 (4 credits) -- Methods and Techniques of Educational Research.....

This course is a critical study of the principal methods employed in the investigation of educational problems and an evaluation of the procedures and standards used in reporting the findings.

(CIRCLE ONE)

HONORS = A HIGH PASS = B+ PASS = B

* Education 897 (2 credits) -- Research Problems in Education.....

This course is concerned with the individual investigation of a problem in the area of educational research. The course is designed first to expose the trainees to a variety of educational research efforts. Each trainee will be expected to develop a research proposal which will have practical importance and relevance to his home district, agency, institution or other educational organization.

(CIRCLE ONE)

HONORS = A HIGH PASS = B+ PASS = B

ADDITIONAL COMMENTS: _____

Participant Signature: _____

Participant Follow-Up Evaluation Questionnaire
H.E.W. Summer Research Institutes 1967-1970
U.S. Office of Education
National Center for Educational Research and Development

Prepared by

Bureau of Educational Research and Testing Services
P.O. Box Q
University of New Hampshire
Durham, N.H.

March 4, 1971

Participant Personal Data

Full Name _____

Home Address _____ Home Phone: _____

Business Address _____ Business Phone: _____

Job Title _____ Year of Institute Attended _____

Years in Present Position _____

Directions

1. Although the Participant Personal Data section isn't absolutely vital, if you have no objections to it please fill in the proper blanks listed above.

2. If individual questions or parts of questions do not apply to the Institute you attended, simply omit those questions and/or parts.

3. When asked to express an opinion feel free to use the back of the questionnaire or attach a separate sheet. PLEASE, if you do this, be sure to identify by number, the question you are responding to.

4. Be as SPECIFIC and PRECISE in your responses as you can.

5. Question 10 asks for two responses to each section:
   (a) the importance of the material to you when presented at the Institute
   (b) the importance of the material to you now in your present job.

1. How many programs/projects proposals did you initiate/write prior to attending your Institute?_____

2. How many programs/project proposals did you initiate/write since attending your Institute?_____

3. Since attending the Institute have you written/initiated any of the following:

Proposals (Fed., State, Local) titles_____

_____

_____

Evaluations:_____

_____

_____

Research Studies:_____

_____

_____

4. My job role and/or function, since attending the Institute has changed from _____to_____.

5. What is the present status of the program/project/proposal you were required to submit as part of your Institute experience?

_____

_____

_____

6. Since your Institute experience have you been in contact with:

A) Institute Staff YES NO B) Institute Consultants YES NO
C) Other Participants YES NO

If yes, please specify the context(s) in which this contact was made

_____

_____

_____

7. Since attending the Institute have you been called on to conduct in-service training programs, workshops or simply give presentations in areas the Institute concentrated on

YES NO NOT APPLICABLE (If yes, please specify the number, content and audience of such activities)

_____

_____

_____

8. Have you taken or been involved in courses, seminars, workshops, etc., since your Institute, related to educational research and evaluation?

YES NO

If yes, please specify date, title, place etc.

_____

_____

_____

9. What have you made of the instructional materials presented to you at your Institute?

_____

_____

10. Please rate the following Instructional areas, as presented in your Institute, ACCORDING TO THEIR IMPORTANCE: (a) while attending the Institute and (b) to your present job position.

		Extremely Important	Important	Minimally Important	Not Important At All	No Opinion Response
Developing and writing behavioral objectives	a					
	b					
The construction and identification of learning heirarchies	a					
	b					
Understanding the various administrative approach to program/project management	a					
	b					

		Extremely Important	Important	Minimally Important	Not Important At All	No Opinion Response
The skill acquired in utilizing the Program Evaluation Review Technique (PERT)	a					
	b					
The CIPP model of Evaluation (Context, Input, Process, Product)	a					
	b					
The skills and practice acquired by writing computer programs	a					
	b					
The skills and practice acquired in operating computers and computer supportive hardware	a					
	b					
The statistical skills offered as an introductory base or general review of those needed in research	a=					
	b					
Knowledge gained from interaction with fellow participants	a					
	b					

		Extremely Important	Important	Minimally Important	Not Important At All	No Opinion Response
Knowledge gained from interaction with B.E.R.T.S. staff (exclusive of outside consultants)	a					
	b					
Knowledge gained from interaction with Institute consultants outside of the classroom	a					
	b					
Knowledge of proposal writing skills acquired	a					
	b					
Importance of readings in required texts as well as outside sources	a					
	b					

11. Do you feel that your job function or role has changed as a result of your participating in the Institute?

/_/ very significantly /_/ significantly /_/ some what

/_/ not at all /_/ don't know

12. Would you commit yourself to a number of such Institutes (6-weeks) to receive an advanced degree such as a Master's in Educational Research and/or Education?

/_/ YES /_/ NO /_/ MAYBE

13. Participants to Institutes of this type should be grouped by experience, job function and expertise on a more

/_/ homogeneous basis /_/ heterogeneous /_/ no opinion

14. Do you feel the use of "big name" consultants from large, outstanding universities at these Institutes is

/_/ of extreme value /_/ something that could be handled by other less well known but comparable trained personnel
/_/ of no significant value /_/ no opinion

15. What are some of the changes you would make assuming you were conducting the Institute?

_____

_____

_____

16. What do you believe the greatest strengths of such Institutes are:

_____

_____

_____

17. What do you believe the greatest weaknesses of such Institutes are:

_____

_____

_____

Additional comment or personal opinion:

_____

_____

_____

Complete any statements on back

Question #		YES	NO
6A	1967	6 (42.9%)	8 (57.1%)
	1968	8 (88.9%)	1 (11.1%)
	1969	10 (47.6%)	11 (52.4%)
	1970	13 (56.5%)	10 (43.5%)
	TOTAL	37 (52.2%)	30 (40.8%)

		YES	NO
6B	1967	4 (28.6%)	10 (71.4%)
	1968	6 (66.7%)	3 (33.3%)
	1969	7 (33.3%)	14 (66.7%)
	1970	16 (69.6%)	7 (30.4%)
	TOTAL	33 (49.3%)	34 (50.7%)

		YES	NO
6C	1967	8 (57.1%)	6 (42.9%)
	1968	7 (77.8%)	2 (22.2%)
	1969	14 (66.7%)	7 (33.3%)
	1970	22 (95.7%)	1 (4.3%)
	TOTAL	51 (76.1%)	16 (23.9%)

		YES	NO	N/A
7	1967	3 (21.4%)	11 (78.6%)	----
	1968	3 (33.3%)	5 (55.6%)	1 (11.1%)
	1969	11 (52.4%)	9 (42.9%)	1 (4.8%)
	1970	14 (60.9%)	9 (39.1%)	----
	TOTAL	31 (46.3%)	34 (50.7%)	2 (3.0%)

		YES	NO
8	1967	4 (28.6%)	10 (71.4%)
	1968	4 (44.4%)	5 (55.6%)
	1969	7 (33.3%)	14 (66.7%)
	1970	12 (52.2%)	11 (47.8%)
	TOTAL	27 (40.3%)	40 (59.7%)

TABLE 10 A

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	8-57.2%	1-7.1%	--	3-21.4%
1968	1-11.1%	6-66.7%	1-11.1%	--	1-11.1%
1969	8-38.0%	11-52.4%	--	1-4.8%	1-4.8%
1970	5-21.7%	12-52.2%	3-13.0%	2-8.7%	1-4.4%
TOTAL	16-23.9%	37-55.2%	5-7.5%	3-4.4%	6-9.0%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	5-35.8%	1-7.1%	1-7.1%	4-28.6%
1968	3-33.3%	3-33.3%	2-22.3%	--	1-11.1%
1969	8-38.0%	9-42.9%	1-4.8%	2-9.5%	1-4.8%
1970	8-34.9%	10-43.5%	3-13.0%	1-4.3%	1-4.3%
TOTAL	22-32.8%	27-40.4%	7-10.4%	4-6.0%	7-10.4%

****

TABLE 10 B

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	9-64.3%	2-14.3%	--	3-21.4%
1968	1-11.1%	4-44.4%	1-11.1%	1-11.1%	2-22.3%
1969	3-14.3%	11-52.4%	5-23.8%	1-4.8%	1-4.7%
1970	3-13.0%	11-47.8%	8-34.9%	1-4.3%	--
TOTAL	7-10.4%	35-52.2%	16-23.9%	3-4.5%	6-9.0%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	6-42.9%	1-7.1%	2-14.3%	4-28.6%
1968	1-11.1%	1-11.1%	3-33.4%	2-22.2%	2-22.2%
1969	--	8-38.1%	9-42.9%	3-14.3%	1-4.7%
1970	3-13.0%	6-26.1%	10-43.5%	3-13.0%	1-4.4%
TOTAL	5-7.5%	21-31.3%	23-34.3%	10-14.9%	8-12.0%

TABLE 10 C

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	8-57.1%	2-14.3%	--	2-14.3%
1968	3-33.3%	2-22.2%	2-22.2%	--	2-22.3%
1969	5-23.8%	12-57.1%	3-14.3%	--	1-4.8%
1970	7-30.4%	15-65.2%	1-4.4%	--	--
TOTAL	17-25.4%	37-55.2%	8-11.9%	--	5-7.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	4-28.6%	4-28.6%	2-14.3%	1-7.1%	3-21.4%
1968	2-22.2%	2-22.2%	1-11.1%	2-22.2%	2-22.3%
1969	4-19.0%	11-52.4%	4-19.0%	1-4.8%	1-4.8%
1970	10-43.5%	11-47.8%	2-8.7%	--	--
TOTAL	20-29.9%	28-41.8%	9-13.4%	4-6.0%	6-8.9%

****

TABLE 10 D

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	7-50.0%	1-7.1%	--	5-35.8%
1968	3-33.3%	3-33.3%	2-22.3%	--	1-11.1%
1969	2-9.5%	11-52.4%	5-23.8%	1-4.8%	2-9.5%
1970	8-34.8%	9-39.1%	5-21.7%	1-4.4%	--
TOTAL	14-20.9%	30-44.8%	13-19.4%	2-3.0%	8-11.9%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	3-21.4%	3-21.4%	1-7.1%	6-43.0%
1968	2-22.2%	2-22.2%	4-44.4%	--	1-11.2%
1969	4-19.0%	4-19.0%	8-38.1%	3-14.3%	2-9.6%
1970	4-17.4%	12-52.2%	7-30.4%	--	--
TOTAL	11-16.4%	21-31.3%	22-32.8%	4-6.0%	9-13.4%

TABLE 10 E

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	5-35.7%	3-21.4%	--	6-42.9%
1968	1-11.1%	5-55.6%	2-22.2%	--	1-11.1%
1969	2-9.5%	12-57.2%	5-23.8%	--	2-9.5%
1970	9-39.2%	13-56.5%	--	1-4.3%	--
TOTAL	12-17.9%	35-52.2%	10-14.9%	1-1.5%	9-13.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	2-14.3%	5-35.7%	1-7.1%	6-42.9%
1968	1-11.1%	2-22.2%	3-33.4%	2-22.2%	1-11.1%
1969	5-23.8%	7-33.3%	3-14.3%	3-14.3%	3-14.3%
1970	11-47.8%	12-52.2%	--	--	--
TOTAL	17-25.4%	23-34.3%	11-16.4%	6-9.0%	10-14.9%

****

TABLE 10 F

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	6-42.9%	4-28.6%	2-14.2%	--
1968	4-44.4%	1-11.1%	2-22.2%	2-22.3%	--
1969	2-9.5%	10-47.6%	7-33.3%	--	2-9.6%
1970	1-4.3%	4-17.4%	3-13.0%	3-13.0%	12-52.3%
TOTAL	9-13.4%	21-31.3%	16-23.9%	7-10.4%	14-21.0%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	3-21.4%	4-28.6%	5-35.7%	1-7.2%
1968	2-22.2%	3-33.3%	2-22.2%	2-22.3%	--
1969	1-4.8%	6-28.6%	6-28.6%	6-28.6%	2-9.4%
1970	2-8.7%	2-8.7%	5-21.7%	2-8.7%	12-52.2%
TOTAL	6-9.0%	14-20.9%	17-25.4%	15-22.4%	15-22.3%

TABLE 10 G

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	6-42.9%	5-35.7%	1-7.1%	1-7.1%
1968	2-22.2%	3-33.3%	3-33.3%	1-11.2%	--
1969	--	7-33.3%	10-47.6%	2-9.5%	2-9.6%
1970	--	2-8.7%	5-21.7%	4-17.4%	12-52.2%
TOTAL	3-4.5%	18-26.9%	23-34.3%	8-12.0%	15-22.3%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	4-28.6%	4-28.6%	5-35.7%	1-7.1%
1968	2-22.2%	4-44.4%	2-22.2%	1-11.2%	--
1969	--	6-28.6%	7-33.3%	6-28.6%	2-9.5%
1970	--	2-8.7%	4-17.4%	4-17.4%	13-56.5%
TOTAL	2-3.0%	16-23.9%	17-25.3%	16-23.9%	16-23.9%

****

TABLE 10 H

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	5-35.7%	8-57.1%	1-7.2%	--	--
1968	4-44.4%	3-33.3%	2-22.3%	--	--
1969	2-9.5%	11-52.4%	5-23.8%	1-4.8%	2-9.5%
1970	2-8.7%	6-26.1%	2-8.7%	4-17.4%	9-39.1%
TOTAL	13-19.4%	28-41.8%	10-14.9%	5-7.5%	11-16.4%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	9-64.3%	--	1-7.1%	1-7.2%
1968	3-33.3%	2-22.2%	4-44.5%	--	--
1969	3-14.3%	9-42.9%	6-28.6%	1-4.8%	2-9.4%
1970	4-17.4%	6-26.1%	2-8.7%	1-4.3%	10-43.5%
TOTAL	13-19.4%	26-38.8%	12-17.9%	3-4.5%	13-19.4%

TABLE 10 I

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	6-42.9%	7-50.0%	1-7.1%	--	--
1968	2-22.2%	5-55.6%	2-22.2%	--	--
1969	15-71.4%	5-23.8%	--	--	1-4.8%
1970	10-43.5%	8-34.8%	5-21.7%	--	--
TOTAL	33-49.3%	25-37.3%	8-11.9%	--	1-1.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	4-28.6%	8-57.1%	1-7.1%	--	1-7.2%
1968	2-22.2%	2-22.2%	3-33.4%	2-22.2%	--
1969	14-66.7%	5-23.8%	1-4.8%	--	1-4.7%
1970	9-39.1%	9-39.1%	5-21.8%	--	--
TOTAL	29-43.3%	24-35.8%	10-14.9%	2-3.0%	2-3.0%

****

TABLE 10 J

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	4-28.6%	9-64.3%	1-7.1%	--	--
1968	4-44.4%	4-44.5%	--	--	1-11.1%
1969	9-42.9%	11-52.4%	--	--	1-4.7%
1970	8-34.8%	8-34.8%	4-17.4%	3-13.0%	--
TOTAL	25-37.3%	32-47.8%	5-7.5%	3-4.5%	2-2.9%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	9-64.3%	--	1-7.1%	2-14.3%
1968	3-33.3%	2-22.2%	4-44.5%	--	--
1969	7-33.3%	7-33.3%	5-23.8%	1-4.8%	1-4.8%
1970	8-34.8%	6-26.1%	6-26.1%	3-13.0%	--
TOTAL	20-29.9%	24-35.8%	15-22.4%	5-7.5%	3-4.4%

TABLE 10 K

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	7-50.0%	3-21.4%	2-14.3%	1-7.2%
1968	--	4-44.4%	3-33.3%	1-11.1%	1-11.2%
1969	3-14.3%	13-69.0%	3-14.3%	1-4.8%	1-4.8%
1970	6-26.1%	12-52.2%	3-13.0%	1-4.4%	1-4.4%
TOTAL	10-14.9%	36-53.7%	12-17.9%	5-7.5%	4-6.0%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	6-42.9%	3-21.4%	2-14.3%	3-21.4%
1968	1-11.1%	--	4-44.5%	4-44.4%	--
1969	2-9.5%	11-52.4%	3-14.3%	4-19.0%	1-4.8%
1970	8-34.8%	9-39.1%	4-17.4%	1-4.4%	1-4.4%
TOTAL	11-16.4%	26-38.8%	14-20.9%	11-16.4%	5-7.5%

****

TABLE 10 L

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	11-78.6%	--	--	--
1968	5-55.6%	2-22.2%	1-11.1%	1-11.1%	--
1969	6-28.6%	12-57.1%	1-4.8%	1-4.8%	1-4.8%
1970	9-39.1%	9-39.1%	4-17.4%	1-4.4%	--
TOTAL	23-34.3%	34-50.7%	6-9.0%	3-4.5%	1-1.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	6-42.9%	3-21.4%	1-7.1%	1-7.1%
1968	2-22.2%	4-44.4%	3-33.3%	--	--
1969	9-42.9%	7-33.3%	3-14.3%	1-4.8%	1-4.8%
1970	12-52.2%	9-39.1%	1-4.4%	1-4.4%	--
TOTAL	26-38.8%	26-38.8%	10-14.9%	3-4.5%	2-3.0%

TABLE 10 M

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	7-50.0%	4-28.6%	--	--
1968	1-11.1%	5-55.5%	3-33.3%	--	--
1969	7-33.3%	9-42.9%	4-19.0%	--	1-4.8%
1970	4-17.4%	11-47.8%	7-30.4%	1-4.4%	--
TOTAL	15-22.4%	32-47.8%	18-26.9%	1-1.5%	1-1.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	7-50.0%	4-28.6%	--	1-7.1%
1968	--	5-55.6%	4-44.4%	--	--
1969	7-33.3%	7-33.3%	5-23.8%	1-4.8%	1-4.8%
1970	3-13.0%	12-52.2%	6-26.1%	2-8.7%	--
TOTAL	12-17.9%	31-46.3%	19-28.4%	3-4.5%	2-3.0%

****

QUESTION		Very Significant	Significant	Somewhat Significant	Not At All	Don't Know
11	1967	2 (14.3%)	---	7 (50.0%)	4 (28.6%)	1 (7.1%)
	1968	3 (33.3%)	---	4 (44.4%)	1 (11.1%)	1 (11.1%)
	1969	4 (19.0%)	10 (47.6%)	6 (28.6%)	1 (4.8%)	---
	1970	4 (17.4%)	10 (43.5%)	5 (21.7%)	3 (13.0%)	1 (4.4%)
	TOTAL	13 (19.4%)	20 (29.9%)	22 (32.8%)	9 (13.4%)	3 (4.5%)

		YES	NO	MAYBE
12	1967	6 (42.9%)	2 (14.2%)	6 (42.9%)
	1968	6 (66.6%)	2 (22.2%)	1 (11.1%)
	1969	11 (52.4%)	2 (9.5%)	8 (38.1%)
	1970	10 (43.5%)	6 (26.1%)	7 (30.4%)
	TOTAL	33 (49.3%)	12 (17.9%)	22 (32.8%)

		HOMOGENEOUS	HETEROGENEOUS	NO OPINION
13	1967	5 (35.7%)	6 (42.9%)	3 (21.4%)
	1968	4 (44.4%)	3 (33.3%)	2 (22.2%)
	1969	2 (9.5%)	9 (42.9%)	10 (14.9%)
	1970	15 (65.2%)	6 (26.1%)	2 (8.7%)
	TOTAL	26 (38.8%)	24 (35.8%)	17 (25.4%)

		Extreme Value	Handled by Less Well Known	No Significant Value	No Opinion
14	1967	5 (35.7%)	9 (64.3%)	---	---
	1968	2 (22.2%)	5 (55.6%)	2 (22.2%)	---
	1969	8 (38.1%)	10 (47.6%)	2 (9.5%)	1 (4.8%)
	1970	13 (56.5%)	7 (30.4%)	1 (4.4%)	2 (8.7%)
	TOTAL	28 (41.8%)	31 (46.3%)	5 (7.5%)	3 (4.5%)

FILMED FROM BEST AVAILABLE COPY

EVALUATION

I. ON-SIGHT EVALUATION

A. Will enhance the "expertise" of the participants.

B. Will establish a degree of rapport between the 1970 participant, the Institute personnel, and the LEA.

C. It also involves the LEA directly with the institute personnel. ("I know that they care").

1. LEA personnel and participants will be able to give a candid, yet valuable, evaluation of the program, which in turn will be a direct indication of the affectiveness of the Institute upon the immediate needs of the agency. (i.e.) Promotions, contributions of Participants, etc.

2. Information can be obtained by the institute leaders and HEW as to the direction of future institutes.

3. Most important, LEA's, participants, and future participants will feel a part of the "Power structure" and will be willing to assist and participate in the program more extensively.

D. Will enhahce the personal relationship between all of the bureacracy.

II. QUESTIONNAIRE AND CONFERENCE CALLS

A. Questionnaire to participants

B. Questionnaire to supervisor or some superior.

1. Problems may be encountered.

(a.) Lack of response
(b.) A breakdown in communications between participant, supervisor, and institute.

(c.) "Red tape" of beauracracy and authority.
(d.) "Seeing is believing".

C. Follow-up by a conference call with team members.

D. Conference calls to Participants and supervisors.

1. Problems to be encountered.

(a.) "True evaluation

1. Unaware of potential
2. Unrealistic reporting. (Superior rating for "Uncle Fed".)
3. The lack of confidentiality of long distance telephone calls.

INTERVIEW SCHEDULE

Participant

Part I

1. People attend Institutes for a variety of reasons:
   (a.) What was your professional reason(s) ?
   (b.) What was your major personal reason(s) ?

2. What problem situations did you encounter:
   (a.) Release
   (b) Transportation
   (c.) Finances

3. What was expected of you after your return from the Institute:
   (a.) from your employer
   (b.) from yourself
   (c.) from your family

4. What are the skills and knowledge you perceive as essential?

5. What is the condition of school integration in your area ?

6. How is it affecting black teachers and black administrators ?

7. How is it affecting you personally ?

8. Some peple believe that degrees of integration between whites and blacks are essential as knowledge is dispersed from a center of understanding such as the University of New Hampshire through this institute. While mere contacts between diverse groups seeking common knowledge are not a panacea for our social ills, the absence of contacts blocks even the potential for understanding. I am interested in the experiences of social inter-action you have had with southern and northern whites and southern and northern blacks in various regions and under varying circumstances.

9. Are you making decisions in your agency ?
   A. What are they?
   B. How are they accepted ?

10. Do you feel that the summer Institute was helpful to you?
    (a.) How?

11. How does your supervisor feel about your attending the Institute ?

12. Has there been a change in your job function or role as a result of your participation in the Institute ?

13. Would you like to attend the Institute again for six weeks ?
    (a.) More or Less ?

14. Would you return if you recieved a degree (i.e.) Masters or Doctorate in Educational Research ?

15. Have you written any proposals or directed any projects other than the required prposals ?
    (a.) Federal
    (b.) State
    (c.) Local

16. How useful has the Institute information been in your job ?

17. Has your supervisor invited you to share your experiences with others ?

PART II

1. How long did it take you to write your proposal ?

2. Has your proposal been:
   (a) implemented
   (b) Financed
   (c) accepted in your area

3. Did you have difficulty getting the program funded ?

4. How are your superiors accepting the idea of your proposal?

5. What do you feel are the successful factors of your proposal ?

6. With what aspects of your proposal are you experiencing most difficulty ?

7. Which instruction area was most helpful to you in the development of your proposal ?

8. Have you recieved any assistance from:
   (a) Institute staff
   (b) participants
   (c) Consultants
   (d) Other.

9. What is your basic need in the fulfillment of your project ?

10. The Observation of the project/Er any consultative assistance that the participant may have.

INTERVIEW SCHEDULE

Supervisor

1. What type of employer is (type of participant) _____?

2. What is your evaluation of _____ _____?

3. Were you aware of his/her attendance at the HEW Institute ?

4. Do you feel that the HEW Institute was helpful or harmful ?

5. Do you utilize _____ in the decision making process ? How long ?

6. Is he/ her an asset to your program ?

7. How do you hope use his/her skills in this agency ?

8. Do you feel that he/she will earn a promotion in the near future ? What ? Why?

9. When was his/her last promotion ? What ?

10. Give any additional information about _____.

INTERVIEW RESULTS

Participants

Part I

	Professional	Personal
1.	8	8

There was no difference in the responses of the participants as to the reason for their attendance to the Institute. It was readily recognized that the person had the chance to attend the program and they took advantage of the opportunity. The average response was geared toward their personal reason as being their professional reason. The personal reason in most cases was associated with their personal reason.

2.	a. Release	0
	b. Transportation	3
	c. Finances	8

Release was not a problem because all of the persons were not employed during the summer.

Transportation was a problem for three of the participants, because of their mode of transportation. Airline schedules difficult to meet and their living a considerable distance from the airport.

Finances was important to the individuals because most of these persons had to readjust their lives to the stipend. However, the participants were reimbursed for their travel expenses, the major problem was centered around the money earned during the

Institute. This amount was not enough to meet the needs of the families at home.

3.	High Expectations	For the Record	Not important
Employer	2	6	1
Yourself	8	1	0
Family	9	0	0

4.		
	Behavioral objectives	3
	Learning Heirarchies	2
	Program/Project Management	1
	PERT	4
	CIPP	3
	Computer Programs	
	Research Techniques	1
	Social Interaction	
	Proposal Writing Skills	5

5.		
	Excellent	0
	Very Good	2
	Good	3
	Fair	3
	Poor	0
	*Not important	2

These persons lived in a black community. Their schools are not involved in the problems.

The supporting response was always "The school integration program is not what it should be".

6.	Problem for black teachers	3
	Equally competitive	2
	No problem	0
	Not applicable	3
7.	Favorable	5
	Unfavorable	1
	Indifferent	3

8.

	Blacks		Whites	
	Southern	Northern	Southern	Northern
Job	8		8	
For supervision	2		3	
Under supervision	4		4	
Social Interaction	8	8	8	8
Professional Activities	9	6	9	7

9.

Direct Decision	Indirect Decision	N/A
2	6	1

Most of the decisions are made through the supervision. Though there are two individuals who make decision directly, they also attempt influence their supervisor and make decisions for their subordinates.

All of the participants indicated that their decisions are usually accepted.

10. See Item 1.

All of the participants felt that the program was helpful to them.

11. All of the respondents indicated that their supervisors felt that the program was helpful for their personnel.

12.

Promotion	Demotion	No change
2	1	6

13. All persons would be happy to attend the program again. For more or less time.

14. All responses was yes.

15.

Written	Directed Project	N/A
4	1	1

Other participants (workshop, etc.)

a. Federal 1

b. State 2

c. Local 6

16.

Useful	Not useful	N/A
8	0	1

17.

Share Experience	Not share experience
4	5

All of the participants shared their experiences with others through conversations, etc.

Part II

1. The average time for writing the proposals was four (4) weeks. Other job committments cause most of the persons the delay in returning their proposals to U.N.H.

2.

Implemented	0
Financed	1
Accepted in your area	4
Negotiating	2
Proposal incomplete	2

3.

Difficulty	No difficulty	N/Resp.
7	0	2

4.

Accepting	Rejecting	N/R
6	1	2

5.

Educational innovation	2
Projected ideas (new/revised)	3
Community concern	2
Educational concern	1
N/Response	1

6.

Financing	7
Completing	2

7. See Item 4.

8. Institute staff

Participants 5

Consultants 8

Other 2

9. All response:

Assistance in funding

10. Indicated in Narrative Report.

SUPERVISORS RESPONSES

1. All responses were excellent (8)

2. Same as above (8)

3. yes (6) no (2)

4. Helpful (8)

5. yes (8)

The average response - 3 years

6. yes 8 responses

7. yes (5) no (3)

8. yes (8)

All of the promotion depended on the opening. Only two supervisors indicated a specific job. They were promotions to supervisors.

9. Supervisor 1

Principal 1

Asst. Principal 1

Promotion w/o change of job or category 3

Southern Blacks and N.H. NEW Institute 1970

My initial reaction to the NEW Institute directed through B.E.R.T.S. of the University of New Hampshire during the past three years was, if they are needed and are good for New England educators, they should be needed and good for Southern Black educators, accepting the multitude of lacks produced by long standing segregated school systems.

Although my initial concern with the black group to attend the institute centered around orientation to an anticipated new cultural milieu, my interest in their educational qualifications grew dominant as the recruiting progressed.

Advanced degrees for Southern blacks have traditionally been earned by hurdling many obstacles. Few black institutions conferred master's degrees; fewer yet, the doctorate. Most graduate work for Southern blacks had to be done away from home, usually at a new institution, often out of the South and usually predominatly white. Here the adequacy of their undergraduate preparation was critically assessed.

Much of the studying done for the master's degree, especially in education, was confined to the summer period. Doctoral degree programs with more stringent residence requirements often meant an up-rooting of the family with the usual problems of black relocation or a temporary splitting up of the family during the period of residency. The revealed and the hidden costs of a doctoral program were often not justified by the job opportunities available in the candidates' home community or elsewhere in the South or in the North.

If, inspite of these various obstacles, a Southern black successfully completed a doctoral program, he would tend to move into higher education.

So, in the credential game, blacks are most likely to presen t master's degree as their advanced degree, butressed perhaps with summer institues.

The following is my initial rationale for a week's orientation period for the Southern black participants in the NEW Institute.

1. To allow the black members time to become acquainted with each other without the presence of the whites and the pressures of learning.

2. To allow them an opportunity to relate to resident blacks and see the "black New Hampshire" living through their eyes. (See list)

3. To have an opportunity through informal gatherings to express concerns relating to the program and their own situation.

4. To have an opportunity through informal gatherings to express concerns relating to the program and their own situation.

5. To build mutual trust and confidence between the individuals and the staff of the Institute.

6. To ward off a "black caucus of protest" that often occurs in integrated settings that intentionally or unintentionally fail to meet the needs and abilities of black participants.

7. To establish a social climate that would maximize learning and mutual interaction and sharing.

The following flexible schedule was planned.

First day: Wednesday afternoon, arrival and settling in"

Wednesday evening, first orientation session at Stokes Hall -- discussion of New England and New England life, with special reference to New Hamp.

Second day: Thursday, breakfast at the Curwood Homestead. Emphasis on getting acquainted.

Thurs. afternoon - meeting on campus with Mrs. Adams
r. Johnson, admissions officer for black students

Discussion of black students on campus.

Evening meeting with black members of the wider community/recreation/theater etc.

Third day: Friday morning, Individual Interviews with Curwood

Friday afternoon; meeting with HEW Institute staff members

Evening free

Fourth day: Saturday, morning: Individual Interviews

Saturday afternoon: Area sight-seeing.

Saturday evening: BERTS, institute staff and participants picnic and supper at home of Jan and Herb Scheibel

Fifth day: Sunday morning: Church - sightseeing, beach, etc. and afternoon

Evening: Welcoming of other members of the institute.

The initial plans for orientation were severly modified.

1/ The lateness of recruiting early showed that a full work week period for orientation was impossible. The proposed five day period, starting on Wednesday would include the fourth of July holiday.

2. In spite of the later starting date, all of the participants did not arrive on time and some did not arrive within the disignated period when individual interviews were scheduled. Only six of the ten black participants were interviewed.

3. Two black participants, not part of the ten, and one paticipant from Guam participated in the full five day period.

Wednesday evening four persons met with me.

Thursday morning, five came for breakfast. This was a very pleasant experience. "Who knows whom" is an accepted and important disignation in Southern black groups that are criss-crossed by colleges attended, mutual friends, kinship and fraternalties. Several bonds of solidarity were forged. Information about New England and New Hampshire was given and information about participants was shared informally.

Friday's day, awaiting the arrival of more members, favored several informal relationships with Institutional staff members. By afternoon, I was able to interview two members. Saturday morning I interviewed two more. The picnic supper was held at my place. A friendly cooperative spirit prevailed as the five black members were joined not only by he Institute and BERTS staff members, but also by other early arriving white participants. I rejoined the group Sunday afternoon in time to welcome more black participants and to interview two more. During the institute, I met the rest of the black participants, took some sight-seeing in Portsmouth, but I did not have an opportunity to complete the interviewing.

List: potential guests.

Lena Coleman: Long time resident of Concord, N.H.

Melvin Bolden: Deck Road, Loudon, N.H. Politically active in the Democratic party.

The Bacon Brothers: of Pembroke, owner of a rug cleaning plant in Concord, N.H. Mrs. Bacon works for the Family Service Agency in Concord.

Clifford Lawrence of Andover, Mass.: works with the Deaf and Blind Children's Division in Concord.

The questionaire that the participants filled out sought background information about the participants spouse and parents to gain some small understanding of the present home-educational background and the possible childhood home-educational background of an adult engaged in education.

The interview schedule must be viewed as a preliminary form probing at generalized areas of concern that I thought might be relevant to help us understand the interviewee during a "committed to, but not actually in" situation as a base line for later comparisons.

The questions, I believe, are relatively self-explanatory.

The final sheet on which social interaction was recorded has potential for usefulness, but needs an improvement.

The six interviews came from four states. Two from Tennessee, two from Louisiana (north - south), and one each from Mississippi and Texas. Three of the interviewees were males, three females. One was not married. Most (4), were between the ages of 42 and 47. One was over fifty - the other under 30. To round it out the average age was 42.

All interviewees are basically stabiles. All are living in the state where they were born; all received undergraduate education in their home state, half of the group did graduate study in their home state. Of the five who were married, four of their spouses were also born and educated in the home state.

All but one held master's degrees; four of them in education, one in history. One husband completed high school and one college. All three wives have college degrees - one a masters'.

A total of 9 children belong to the five who are married; one has four children, one teo and the rest have only one child.

The interviewees represented a rather immobile group of persons - well educated within their respective communities. The men are married to college graduate wives. The family size, with one exception, the farm family, is very small, but rather typical of the southern middle class Negro family, long represented in "school teaching".

The educational achievement of parents, in general, is of a lesser level than that of their children. Only two of the interviewees had fathers who had completed college; only one had a mother who had completed college. One had a mother who attended college for two years, but whose father had completed high school. The education of the other four fathers was 7th - 8th (2), 4th (1), DK (1). Of the other four mothers, one completed high school, (2) 7th - 8th, and one DK.

If the five spouses' parents, three fathers and two mothers were DK's, two fathers and three mothers were 7th grade; the "children" have made big leaps compared with their parents.

#1 All but one of the interviewees saw themselves as having been recruite for the prgram by a black. The single one directly attributable to a white recruiter came about as an accident. (I mistook Texas A & M (predominantly white) for Prairie View (predominantly black).)

Two to three contacts - rather chain effect wer used to recruit. The process was much more time consuming than I had anticipated, but I feel we opened up new channels for future training. Much of what "happens" seems not to filter through to black educators.

Four of the participants were recruited mainly through college contacts; two, through state departments of education.

#2 All were pleased to be coming to the Institute. For the most part, it was an opening up of an unknown section of the country. Only one expressed mixed feelings of being maneuvered to come to used as a "symbol"

#3 Most cause professionally to learn and start or continue graduate work in a more challenging environment. Several were encouraged by supervising persons to come.

Personally most had a curiosity about a new section of the country. One had made plans for his family to share in the experience the last week - joining work and recreation.

#4 None, expect few logistic details.

#5 The shortness of the time between being accepted and having to come caused the most problems - for some it meant release from regular summer obligations, for one an actual salary loss and failure to complete one more course for certification (9 New Hampshire credits are not worth anything) - in this case. For one without charge cards, the actual money for travel was a big hurdle. The trip for the most part was very long and exhausting. The least number of problems were faced by those participants who knew in April that they would probably come.

#6 No one seemed to have a clear picture of what the experience would mean when they returned i.e. no clear responsibility "to take back" information. One member had relatively clear resposibility to the extent that most of the time he would be at the Institute, he should have been on the job. He came with the blessings of an active superintendent who could forsee benefits to the system from this experience. One interviewee is responsible for making a full report to the State Office of Education (black sector) and to talk to local groups about the experience.

#7 No one anticipated any problems when they returned to home base.

#8 Only one member seemed fully self-assured about being in the program. The covered self assurance or anxiety or both in a global willingness to learn what needed to be learned. The rest expressed in varying ways and degrees strong anxieties, principally that they would be pushed too hard, not allowed enough time to grasp information fatigue resulting from hard school year mitigated against pacing!!!! No real background in education was one participant's anxiety - certain fear too of the COMPUTER. But all were willing to learn.

#9 Unspecified research skills and computer skills were generally seen as prerequisites. But, again, willingness to learn came most often to the forefront.

#10 A certain feeling of "suspicion" evident in various ways came to the fore in the answering of question 10. The most extremes:

a. don't use it against me. People here may be okay but it's Federal material and the next person might not be okay.

b. don't use it to separate blacks from whites

c. don't degrade

Several generalized that "that is the way it should be." i.e. testing at any time. Overall, they viewed the testing as "partof the game" part of the price they would have to pay to be in the program. (Resignation to fate!)

#11 The overall picture on intergation *------
12

Sometimes a black teacher is offered only one job - if she refuses --- out!

White teachers are resigning, but have other job options blacks do not possess.

If intergration is happening at all, it is to replace good black teachers with poor - less qualified white teachers. Non-tenure teachers may be moved. Theoretically teachers have a choice, but actually it's a Hobson's choice.

Five were quite mindful of intergration problems and relatively knowledgeable about them even when basically in a segregated situation. Only one seemed to just accept the status quo.

Two interviewees held dominant roles over whites, but only one real - the other one was "paper supervision."

#13 Integration had affected personally only two:

one was a principal with white teachers and the other one was moving from a pseudo-integrated situation to an all black one. Both were very aware of discrimination.

#14 Inter-racial contacts in South

1. Trades people only - white --- limited area

2. Wide experiences

   a. Educational meetings - white black

   b. Black friends in Boston and Massachusetts

   c. Integrated church

   d. Studying at "white" institution

   e. School and political contacts (money from black teacher for NAACP)

   f. Supervisor in army school -- wide contacts -- black - white

   g. 6 week institute N.Y. teacher coming in

      health program --- <u>not for BLACKS</u>

   white grad school family white

In general, wider contacts with whites, northern blacks seemed to depend largely on out of south:

1. Contacts maintained with migrating blacks.

2. Sufficient ranking in educational system to be allowed to attend wide range of professional meetings.

3. Broading experience

   a. army attached to educational unit.

   b. graduate study in white institution

4. Job experiences

   - southern whites.

1. How did you hear about the institute?

2. What was your initial reaction?

3. People came to Institute for a variety of reasons:
   a) What was your major professional reason?
   b) What was your major personal reason(s)?

4. What influence did personalized contacts with administrators of the Institute have on your decision?

5. What problem situations did you encounter?
   a) release
   b) transportation
   c) finances

6. What will be expected of you after your return from the Institute?
   a) from your employer?
   b) from yourself?
   c) from your family?

7. Do you anticipate any problems when you return:
   a) working relationships?
   b) inter-personal relationships?

8. What anxieties do you feel about the adequacy of your background for success in the program as you now understand it?

9. What are the skills and knowledge you now perceive as essential?

10. How difficult is it for you to view a testing program as a diagnostic tool for small group planning rather than as a judgment as personl deficiency?

11. What is the condition of schools integrated in your area?

12. How is it affecting black teachers and black administrators?

13. How is it affecting you personally?

14. Some people believe that degrees of intergation between whites and blacks are essential as knowledge is dispersed from center of understanding such as this University through this Institute. While mere contacts between diverse seeking common knowledge are not a panacea for our social ills. The absence of contacts blocks even the potenial for understanding. I am interested in the experiences of social inter-action you have had with southern and northern whites and southern and northern blacks in various regions and under varying circumstances.

Pre-orientation Questionnaire

Dr. Sarah T. Curwood

1. How did you hear about the institute?

2. What was your initial reaction?

3. People come to Institutes for a variety of reasons:
   a) What was your major professional reason?
   b) What was your major personal reason(s)?

4. What influence did personalized contacts with administrators of the Institute have on your decision?

5. What problem situations did you encounter?
   a) release
   b) transportation
   c) finances

6. What will be expected of you after your return from the Institute?
   a) from your employer?
   b) from yourself?
   c) from your family?

7. Do you anticipate any problems when you return:
   a) working relationships?
   b) inter-personal relationships?

8. What anxieties do you feel about the adequacy of your background for success in the program as you now understand it?

9. What are the skills and knowledge you now perceive as essential?

10. How difficult is it for you to view a testing program as a diagnostic tool for small group planning rather than as a judgment as personal deficiency?

11. What is the condition of schools integrated in your area?

12. How is it affecting black teachers and black administrators?

13. How is it affecting you personally?

14. Some people believe that degrees of integration between whites and blacks are essential as knowledge is dispersed from center of understanding such as this University through this Institute. While mere contacts between diverse seeking common knowledge are not a panacea for our social ills. The absence of contacts blocks even the potential for understanding. I am interested in the experiences of social interaction you have had with southern and northern whites and southern and northern blacks in various regions and under varying circumstances.

ED 075002

FINAL REPORT

University of New Hampshire
Summer Research Training Institute

July 6 - August 14, 1970

Planning for Educational Decision-Making in the 70's

Contract Number

OEG-0-7-70-4474

Maurice E. Olivier
Everett W. Barnes, Jr.

Bureau of Educational Research and Testing Services

University of New Hampshire
Durham, New Hampshire

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

July 1971

HE 004082

The institute reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. Department of Health, Education and Welfare

ACKNOWLEDGEMENTS

Credit for the completion of this final report belongs to more than just the authors. Therefore, grateful acknowledgement for support and assistance is extended to the following individuals who contributed to the preparation of this document.

In particular, to Dr. Gilbert R. Austin for his helpful suggestions in the interpretations of empirical data; Dr. Albert Elwell for his assistance in the development of the report format; the evaluation team from the Center for Instructional Research and Curriculum Evaluation, University of Illinois for their skillful assessment of the 1970 Institute Program and for providing us with all of their evaluative data utilized in compiling their comprehensive final report; Mr. Charles Williamson, Jr. for his persistence in conducting the on-site follow-up evaluations for a selected segment of the 1970 Institute participants; Dr. Sarah Curwood for her perceptive insights regarding pre-orientation activities for black participants; and to Dr. John C. Egermeier, Acting Chief, Research Training Branch, National Center for Educational Research and Development - USOE for his patient support during the time this document was being prepared.

Grateful acknowledgement is also expressed to Mrs. Elaine Gardner and Mrs. Carol Powers for their cooperation in typing and assembling the final document and to Mr. Donald H. Bailey, Research Programmer for conducting the necessary computer operations providing us with comparative data from the statistical tables.

Maurice E. Olivier
Everett W. Barnes, Jr.

TABLE OF CONTENTS

- ACKNOWLEDGEMENTS i
- INTRODUCTION iii
- EVALUATION DESIGN - IMPLEMENTATION PROCEDURES v
- EVALUATION OF THE 1970 SUMMER RESEARCH TRAINING INSTITUTE

  - Section I: Product Evaluation 1

    -- Statement of Instructional Objectives 2
    -- Geographical Representation of Participants 5
    -- Assessment of Instructional Program 7

  - Section II: Process Evaluation 20

    -- Administrative Staff 21
    -- Staff: Participant Observers 24
    -- Consultants 25
    -- Participants 28
    -- Instructional Content 29
    -- The Institute As a Whole 36

  - *Appendix A: Product Evaluation*

    -- HEW Institute Brochure Announcement

    -- "Southern Blacks and the New Hampshire 1970 Summer Research Training Institute" -- Dr. Sarah Curwood

    -- Pre-and-Post Instrument

    -- Participant Research/Evaluative Proposals

  - *Appendix B: Process Evaluation*

    -- C.I.R.C.E. Attitude Scale 1.4 and 1.4b

    -- Weekly Institute Participant Opinionnaire - C.I.R.C.E. Summer 1970

    -- Summary Opinionnaire -- C.I.R.C.E. Summer 1970

    -- Participants Observer's Daily Log

    -- Institute Staff Site-Visits Interview Form

EVALUATION OF THE INSTRUCTIONAL EFFECTIVENESS OF THE 1967 to 1970 SUMMER RESEARCH TRAINING INSTITUTES CONDUCTED AT THE UNIVERSITY OF NEW HAMPSHIRE

(Yellow)

- INTRODUCTION 1
- GEOGRAPHICAL REPRESENTATION OF INSTITUTE PARTICIPANTS 2
- SECTION I - RESULTS OF PARTICIPANT FOLLOW-UP QUESTIONNAIRE 4

  PART I -- Total Group Responses By Percentages - Value of Instructional Areas As Perceived During the Institute and From Their Present Job Positions 19

  PART II-- Participant Responses Grouped by Professional Roles - Value of Instructional Area As Perceived During the Institute and From Their Present Job Position 33

- SECTION II - RESULTS OF ON-SITE EVALUATION 42

  - Rationale for Site Visits 43

  - Interview Results - Participants & Supervisors 44

  - *Appendix C -- Evaluation of Instructional Effectiveness of the 1967 to 1970 Summer Research Training Institutes Conducted At the University of New Hampshire*

    -- Statement of Instructional Objectives 1967 - 1970

    -- Copy of Questionnaire

    -- Participant Job Changes

    -- Table B -- Participant Responses Grouped By Professional Roles

- ARE SUMMER RESEARCH INSTITUTES A VIABLE INSTRUCTIONAL STRATEGY? *(Pink)*

  - Suggested Modified Institute Model

- SUPPLEMENTARY *APPENDIX D* - (Separate Document)

INTRODUCTION

The 1970-1971 USOE Title IV HEW Research Training Institute, Planning for Educational Decision-Making in the 70's, represented the fourth in a consecutive-year series of DHEW/OE Summer Research Institutes to be held at the University of New Hampshire, Durham, New Hampshire. These Institute training efforts were supported under grants from the Office of Education -- Research Training Branch within the Center for Educational Research and Development -- funded to the Department of Education at the University of New Hampshire. Each of the Summer Institute programs was administered by the Department's Bureau of Educational Research and Testing Services.

The 1970-71 HEW Institute grant differed from the three earlier training efforts in that it not only provided for an intensive, six-week instructional program, but also provided for a follow-up assessment of the relative effectiveness of the four New Hampshire based Institute programs.

All of the Institute trainees were educators representing a differential array of LEA's, SEA's and Federal, regional and state agencies and institutions. Although the initial (1967) Institute participants consisted mainly of classroom personnel from New Hampshire, the participants in the three subsequent programs included educational administrators, area specialists (e.g., mathematics, science, reading, etc.) ESEA program and project directors, and so on, who were actively involved in a variety of Federal, regional, state and local educational organization efforts.

Thus, the New Hampshire HEW Research Institutes provided an interesting spectrum of instructional objectives, consultants and trainees over a four-year period that afforded an opportunity to conduct comparative analyses and longitudinal follow-up evaluations with regard to the

instructicnal effectiveness of the 1967-1970 HEW Research Institute programs held at the University of New Hampshire.

Perhaps of greater concern to DHEW/OE, however, is that the baseline data accrued from the New Hampshire programs provide an interesting and, in many respects unique set of factors that warrant careful assessment. An in-depth evaluation of these data did permit an assessment of some of the assumptions underlying the New Hampshire program.

Our principal concern was, of course, to assess the instructional effectiveness of research training programs as typified by the four New Hampshire summer institutes. But the natural by-product of such an assessment is the identification and specification of factors upon which recommendations might be made with regard to contemporary research training designs and alternative strategies for program implementation that might be incorporated into OE's further research training efforts.

This document -- the 1970-71 HEW Research Training Institute Report -- is focused on two major evaluative targets: (1) an evaluation of the 1970 summer institute effort, per se, and (2) a longitudinal-based assessment of the instructional effectiveness of the 1967-70 Institute programs separately and in the aggregate. The results of these assessments include not only substantive data but also their associated recommendations.

EVALUATION DESIGN -- IMPLEMENTATION PROCEDURES

The HEW Institute evaluation effort was focused on three principal evaluative targets as follows:

Evaluative Target #1

> To assess the degree of success of the 1970 Institute program including its objectives, instructional design, and pre-instructional implementation procedures.

Evaluative Target #2

> To assess the effectiveness of the instructional program as implemented during the 1970 Institute training program.

Evaluative Target #3

> To conduct a longitudinal follow-up evaluation of the 1970 Institute participants and those trainees who had participated in previous New Hampshire Institute programs as well.

Results of these analytical/evaluative activities are to be used to provide baseline data with regard to recommendations for the design, development and implementation of alternative training strategies to be reviewed by the Research Training Branches -- Center for Educational Research and Development, DHEW/OE.

The responsibility for the assessment of the 1970 Institute Design (Evaluative Target #1) was executed by the external evaluator of the Institute program, the University of Illinois' Center for Instructional Research and Curriculum Evaluation (CIRCE). The primary methodology used included functional system analyses of the administrative components of the program. Techniques consisted of observation, inquiry and interview,

together with the standard evaluative instruments deemed pertinent to the design, development and implementation of the pre-instructional segment of the Institute effort.

Analytical and evaluative activities focusing on the effectiveness of the instructional program itself were conducted principally by the BERTS staff and CIRCE evaluators, respectively. Most evaluative instruments were designed, developed and administered by BERTS and CIRCE and supplemented by pre-designed achievement instruments provided by instructional consultants. In brief, an array of evaluative methodologies, techniques and instruments were employed in the assessment activities associated with Evaluative Target #2.

The longitudinal follow-up evaluation effort (Evaluative Target #3) was conducted by the Institute staff in cooperation with a participant observer of the 1970 program who served as a field evaluator. Due to restricted funds available for a comprehensive on-site evaluation effort, the follow-up activities were confined to mail questionnaires to all participants (1967-70) and a select segment of on-site visitations of 1970 participants by the BERTS staff and the field evaluator.

EVALUATION OF THE 1970 SUMMER RESEARCH TRAINING INSTITUTE

"Planning for Educational Decision-Making in the 70's"

July 6 - August 14, 1970

SECTION I

PRODUCT EVALUATION

PRODUCT EVALUATION

The Bureau of Educational Research and Testing Services, a sub-unit of the Department of Education, University of New Hampshire conducted a six week research training institute during the period of July 6 - August 14. The grant provided for the training of thirty two (32) participants to be selected from any of the fifty states in the UNION and its Territories.

This institute was viewed as the first phase of a five year developmental effort in the area of educational research training. It was proposed in the original document that a series of five summer institutes would be conducted over the next five summers, starting in 1970, which would in fact be viewed as creating a series of basic building blocks called "instructional components." These "components" would be researched and developed until they could stand alone and meet the objectives stated for them. Further, these instructional components could then be assembled in any manner that a research training director might wish, thereby enabling him to create a series of long or short-term institutes depending upon his specific needs and set of objectives.

The general objective of the 1970 summer institute was to conduct a training program which would concern itself with the problems of training educators at the doctoral, post-doctoral level in the skills of project management, educational research and evaluation as aids in the process of decision making. Under this general objective, the institute set for itself the following seven major themes with their specific sub-sets of instructional objectives.

They are as follows:

1. *The first major theme will be the study of the problems inherent in the management of an educational evaluation project.*

   Specific objectives:

   At the end of the institute the participants will demonstrate their ability to perform the following tasks:

   a) *Define systems analysis and the listing of the basic steps related to systems analysis procedures.*

   b) *Define the meaning of management information systems (MIS), list the major component parts of an educational informational management system, and define the essential steps in the implementation of an MIS in actual practice.*

   c) *Define program, planning, budgeting systems (PPBS) and list the component parts of a PPBS system.*

   d) *Define Program Evaluation and Review Technique (PERT). List the basic elements of PERT and prepare a PERT network from a simulated problem situation.*

2. *The second major theme will be the study of the problems inherent in evaluating the particular curriculum changes with which the trainee is concerned. The study of the problem of evaluation will be attacked by having the trainees identify, write, and evaluate objectives for instructional programs in the area of curriculum change in which they are interested.*

   Specific Objectives:

   At the end of the institute the participants will demonstrate their ability to perform the following tasks:

   a) *Identify the objectives for a specific program in the area of their personal interest.*

   b) *Discriminate between well written or poorly written behaviorally stated objectives.*

   c) *Identify and construct a set of performance objectives*

   d) *To translate (where possible) into performance objectives stated in the abstract that they prepared as applicants for this institute.*

2. *The third major theme will be the study of the major alternatives open to the educator in terms of educational research methodologies. For instance: the experimental approach as typified by the work of Campbell and Stanley, or the context, input, process and production (CIPP) model as presented by Daniel L. Stufflebeam.*

Specific objectives:

At the end of the institute the participants will demonstrate their abilities to perform the following tasks:

a) Identify the classification scheme of the CIPP evaluation model.

b) Construct a research study using either context evaluation, input evaluation, process evaluation or product evaluation.

c) Describe the difference between an experimental and a quasi-experimental design for educational research.

4. *The fourth major theme will be the study of the problems associated with the development, dissemination, and adoption process in the area of educational evaluation.*

Specific objectives:

At the end of the institute the participants will demonstrate their ability to perform the following tasks:

a) Identify the problems associated with designing a good research evaluation.

b) Construct a research study which reflects understanding of research design and measurement theory.

c) Distinguish between interpretations which are in fact justified from the data and those which are not justified from the data.

d) Demonstrate through the use of the systems approach the problems associated with developing, disseminating, and adopting the results of educational research within an educational environment.

5. *The fifth major theme will be the study of communications techniques applicable to proper implementation of the decision-making process at various levels of the educational system.*

Specific objectives:

At the end of the institute the participants will demonstrate their ability to perform the following tasks:

a) Interpret the research findings of several journal articles.

b) Demonstrate the competency to apply the findings of a research study to one's local school situation.

c) Describe the problems associated with dissemination and adoption of the general kind of educational research findings to a local school system.

6.* The sixth major theme will be the use of modern data processing equipment to facilitate the encoding and utilization of research data.

Specific objectives:

At the end of the institute the participants will demonstrate their ability to perform the following tasks:

a) Construct a simple computer program.

b) Identify the problems associated with designing an optically scannable document.

c) Demonstrate the ability to operate a remote terminal.

d) Name and describe the use of a variety of modern data processing equipment and its utilization in educational research.

7. The seventh major theme will be the reading of current educational literature relevant to the research project with which the trainee is involved.

Specific Objectives:

At the end of the institute the participants will demonstrate their ability to perform the following tasks:

a) To identify the major reference sources for educational research literature.

b) Construct a bibliography in the area of the trainees' interest.

c) Distinguish the major components of a piece of well written educational research.

*Although this objective was stated in the original proposal as a <u>requirement</u> for the instructional program, it was subsequently made <u>optional</u> to the participants.

GEOGRAPHICAL REPRESENTATION OF PARTICIPANTS

The geographical representation of the participants in this institute was as follows:

	National 1970
Connecticut	1
Florida	2
Georgia	2
Hawaii	1
Iowa	2
Louisiana	2
Massachusetts	3
Michigan	1
Mississippi	2
Montana	2
New Hampshire	1
North Carolian	1
Rhode Island	1
Siapan, Mariana Islands	1
South Carolina	1
Tennessee	3
Texas	2
Virginia	1
	29

As can be seen from Table A presented above the institute participants were drawn from a wide and diverse geographical area. It should be noted here, that the total number of trainees was twenty nine, although the proposal provided for the funding of thirty-two. Thirty participants were actually accepted for the institute, however, one had to "drop out" soon after for personal (not instituted connected) problems. It should also be noted, that in the original proposal under the heading Number and Selection of Participants the following statement was made: *"There shall be no concern for geographical preference among twenty (20) of the participants. They*

will be accepted from any geographical area in the United States or its territories. Ten of the participants however, shall be black educators from the southern states. Knoxville College in Knoxville, Tennessee has agreed to act as a resource for helping to select these southern educators."

In retrospect, without the assistance of Dr. Sarah Curwood of the University of New Hampshire and Dr. Ralph Martin of Knoxville College recruitment and selection of southern black educators would have been virtually impossible. As Dr. Curwood points out in her report, *"Advanced degrees for Southern blacks have traditionally been earned by hurdling many obstacles. Few black institutions confered master's degrees: fewer yet, the doctorate."* Nevertheless, through persistent efforts on the part of Dr. Curwood and Dr. Martin, eleven southern black educators were selected as participants.

Additionally, Dr. Curwood assumed the major responsibility for a one week, pre-institute orientation in order to provide the black educators an opportunity to adjust to the different cultural patterns of New England as opposed to the southern states. A copy of Dr. Curwood's report describing the events and activities for that week is included in Appendix A of this report.

ASSESSMENT OF INSTRUCTIONAL PROGRAM

The institute was conducted daily from 8:30 A.M. to 4:00 P.M. for six weeks. The Department of Education at UNH offered six (6) graduate credits for two courses upon the successful completion of the institute program. These two courses are listed below:

Education 881, (4 credits), Methods and Techniques of Educational Research. This course is a critical study of the principal methods employed in the investigation of educational problems and an evaluation of the procedures and standards used in reporting the findings; designed as an advanced course for candidates for graduate degrees.

Education 895, (2 credits), Research Problems in Education, is concerned with the individual investigation of a problem in the area of educational research. This course was used first to expose the trainees to a variety of educational research. In the latter portion, each trainee was expected to develop a research proposal which will have practical importance and relevance to his home district, or to evaluate a project presently being studied.

In an attempt to determine the adequacy or inadequacy of the instructional objectives, the following assessment tasks were undertaken.

A pre- and post-test was constructed which consisted of 160 multiple choice items. These questions were in general drawn from a test designed by Gene V. Glass entitled, "Mastery Test Items For Courses in Educational Research Methods" a copy of this pre- and post-test will be found in Appendix A of this report. This test had been used in the 1969 summer institute and was found to be very reliable and an adequate measure of the learning that took place in that summer's institute.

A complete summary of statistical tables* based on both the pre- and post-test results are presented, beginning on page 11. They consist of the following:

Table I — The raw scores on the pre-test, post-test and the gain score and percent of gain for each participant.

Table II — Provides the mean and standard deviation as well as the range of both the pre- and post-test. On the pre-test the mean was 73.96 with a standard deviation of 29.48. The range for the pre-test was from a low of 23 to a high of 115, with a range of 92 score points. For the post-test the mean was 85.29 with a standard deviation of 22.97. The low score was 45 and the high score was 128, with a raw score range of 83 score points. This indicates that over the summer there was an 11.33 raw score point gain from pre to post-test, which is significant at beyond the .01 level.

Table III — Presents the Pearson Product Moment Correlation between the pre-test and the post-test. The correlation is .84. This correlation coefficient of .84 indicates a relatively high positive correlation over the six week period. The increase in scores seems to occur evenly throughout the sample meaning that people who did well on the pre-test also did well on the post-test. This correlation coefficient is significant from chance at greater than the .001 level. The square of this correlation coefficient is .71 indicating a much better than chance probability of predicting one score from the other.

*It should be noted that all of these statistics are based on an N of 24 participants. There were in fact thirty participants in the institute but two of them were used by the outside evaluator as participant observers and therefore were not requested to take the test. One "dropped out" for personal reasons, and three others arrived several days after the institute started.

Table IV Presents the calculations for the Spearman Rank Correlation Coefficient and indicates both the pre-test rank and the post-test rank as well as the relative difference. The correlation coefficient here is .86 which is significant at beyond the .001 level.

Table V and Table VI In Table V and VI, split half reliability coefficients are computed for the pre- and post-test. For the pre-test the reliability coefficient is .96, for the post-test it is .88.

Careful examination of these statistics would seem to indicate that the institute was "reasonably successful" in fulfilling its instructional objectives as measured by this particular test. But permit us to digress for the moment. It was noted earlier in this report that one specific criteria for selection of ten of the participants was that they be southern black educators. Accordingly, one interesting dimension of the preceeding assessment data is worth noting. In general, on both the pre- and post-test the performance level of the southern black participants was relatively less than the average white participant. On the other hand, of the twenty-four (24) scores reported, ten black participants achieved the highest percent gain, indicating that they benefited very markedly from the instruction offered to them.

In addition to the so-called Glass pre- and post-tests, the participants were administered an Attitudinal Scale developed by C.I.R.C.E.* As judged by its authors, the instrument distinguishes changes in attitude relative to the broad subject area of evaluation over a period of time. There were five general areas of attitude change that were measured as well as an overall composite score called "Confidence in Evaluation." The five sub-scores concern attitudes about research, service, teaching, objectives and judgment. The results of the pre- and post-attitudinal scale are offered in Table VII.

*See Appendix B -- CIRCE Attitude Scale No. 1.4 and 1.4b

Table VII indicates that on five of the six measures there was a positive attitudinal shift over the six-week period. Only in sub-measure four entitled objectives was there a negative attitudinal shift in the rating scale over the period of six weeks.

Thus, it would seem reasonable to conclude from the results of this attitude scale that, in general, participant attitudes about evaluation became more positive as the six week program drew to a close.

It is also interesting to look at Table VIII* which presents the CIRCE Attitude Scale broken down by black and white participants. Observe, that again the black participants seemed to have shifted their attitudes about educational evaluation markedly in a positive direction. This again reflecting that the instructional program responded adequately to the expectations held by the black participants.

Based upon the instructional program and other related experiences gained during the six week institute, all participants were expected to develop a research and/or evaluation proposal which had practical importance and relevance "back home."

Abstracts of these proposals are included in Appendix A.

The material presented in this section of the report, seems to support the conclusion that in terms of cognitive knowledge and attitudinal changes relative to educational research and educational evaluation, the institute was "reasonably successful" in attaining its instructional objectives.

*The same information is also presented in graphic format -- Ref: Table VIII - Figure I.

TABLE I

Pre- and Post-test Raw Scores, Gain Scores and Percent of Gain

PARTICIPANT NUMBER	X	Y	GAIN	PER CENT GAIN
01	39	45	6	15.4
02	50	61	11	22.0
03	115	114	-1	-.9
04	23	71	48	208.7
05	81	78	-3	-3.7
06	29	65	36	124.1
07	75	66	-9	-12.0
08	71	93	22	30.9
09	48	51	3	6.3
10	46	80	34	73.9
11	91	97	6	6.6
12	108	128	20	18.5
13	55	72	17	30.9
14	110	115	5	4.5
15	70	75	5	7.1
16	112	125	13	11.6
17	97	93	-4	-4.1
18	84	86	2	2.4
19	66	92	26	39.4
20	104	95	-9	-8.7
21	113	122	9	7.9
22	72	76	4	5.6
23	91	83	-8	-8.8
24	25	64	39	156.0

TABLE II

Pre-Test

Mean of X = 73.96

Standard Deviation of X = 29.48

Range: 23 - 115 (92)

Post-Test

Mean of Y = 85.29

Standard Deviation of Y = 22.97

Range: 45 - 128 (83)

TABLE III

Pearson Product Moment Correlation Coefficient

(correlation coefficient - .84)

X	Y
39	45
50	61
115	114
23	71
81	78
29	65
75	66
71	93
48	51
46	80
91	97
108	128
55	72
110	115
70	75
112	125
97	93
84	86
66	92
104	95
113	122
72	76
91	83
25	64

TABLE IV

Spearman Rank Correlation Coefficient

(correlation coefficient - .86)

Participant Number	X	Y	D
03	1	5	-4.0
21	2	3	-1.0
16	3	2	1.0
14	4	4	0.0
12	5	1	4.0
20	6	7	-1.0
17	7	8.5	-1.5
11	8.5	6	2.5
23	8.5	12	-3.5
18	10	11	-1.0
05	11	14	-3.0
22	13	15	-2.0
08	14	8.5	5.5
15	15	16	-1.0
19	16	10	6.0
13	17	17	0.0
02	18	22	-4.0
09	19	23	-4.0
10	20	13	7.0
01	21	24	-3.0
06	22	20	2.0
24	23	21	2.0
04	24	18	6.0

TABLE V

Reliability Coefficient -- Pre-Test

RAW SCORE EVEN	RAW SCORE ODD
22	17
22	28
53	62
12	11
42	39
13	16
42	33
36	35
23	25
24	22
43	48
55	53
26	29
53	57
27	33
59	63
47	50
39	45
33	33
51	53
58	55
35	37
40	41
9	16

RELIABILITY COEFFICIENT .9614

TABLE VI

Reliability Coefficient -- Post-Test

RAW SCORE EVEN	RAW SCORE ODD
27	37
41	42
38	38
65	57
51	44
40	52
40	46
50	53
63	62
35	40
55	60
35	37
64	64
49	48
36	44
26	25
52	41
32	34
32	33
39	39
38	33
58	59
34	27
22	22

RELIABILITY COEFFICIENT .8852

TABLE VII

C.I.R.C.E. Pre- and Post Measure of Attitudinal Change

ALL PARTICIPANTS

SCALE	N	PRE	POST
Research	27	4.0	4.9
Service	27	5.5	6.3
Teaching	27	5.0	6.6
Objectives	27	5.6	5.2
Judgment	27	6.5	7.2
Overall Confidence in Evaluation	27	8.1	9.6

TABLE VIII

C.I.R.C.E. Pre-Post Measure of Attitudinal Change

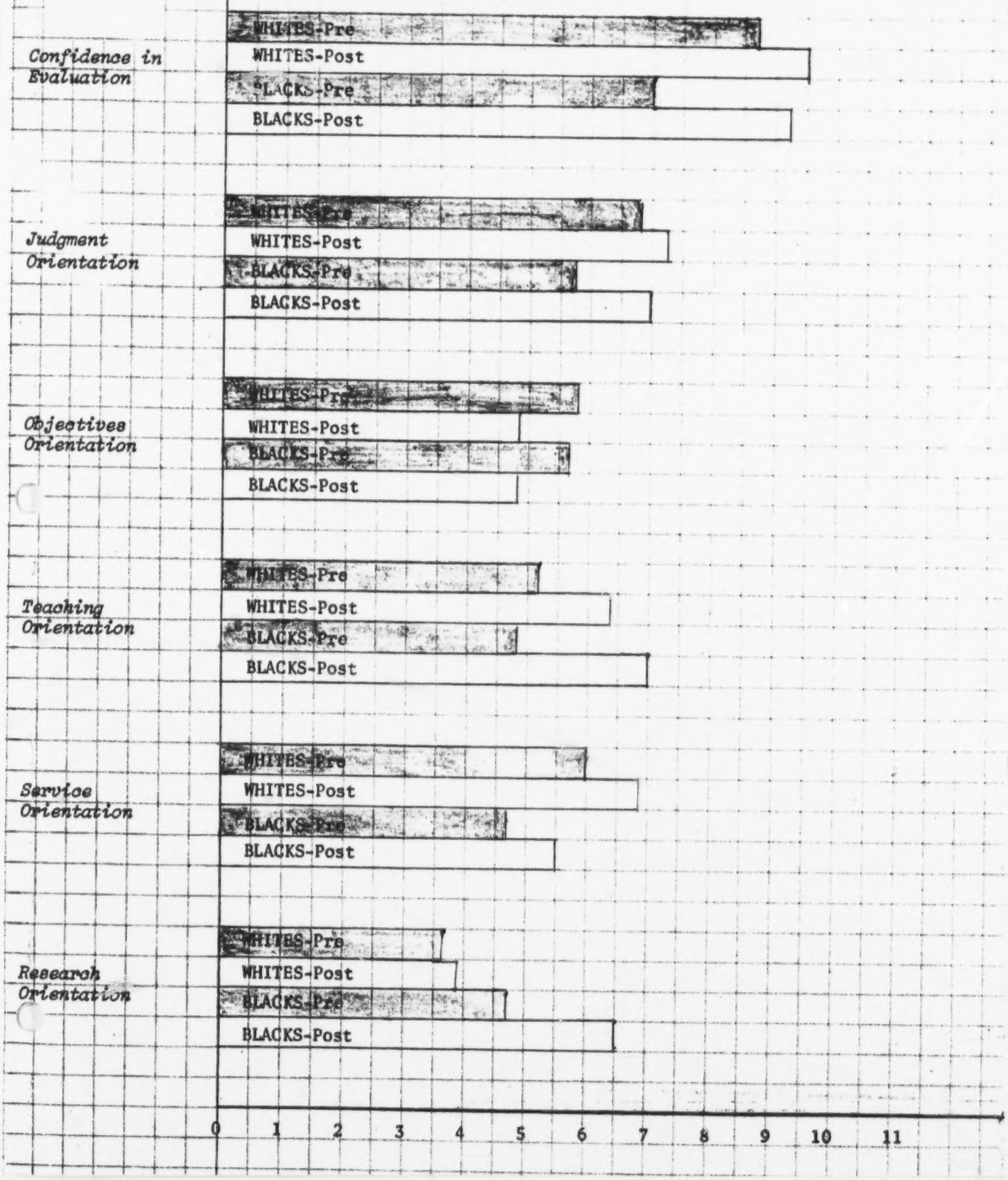
BLACK AND WHITE PARTICIPANTS

BLACKS		PRE		POST
Research	9-	4.7	10-	6.5
Service	9-	4.7	10-	5.5
Teaching	9-	4.8	10-	7.0
Objectives	9-	4.9	10-	5.8
Judgment	9-	5.6	10-	7.0
Overall Confidence in Evaluation	9-	7.0	10-	9.3

WHITES		PRE		POST
Research	18-	3.6	17-	3.9
Service	18-	5.9	17-	6.8
Teaching	18-	5.1	17-	6.4
Objectives	18-	5.9	17-	4.9
Judgment	18-	6.9	17-	7.3
Overall Confidence in Evaluation	18-	8.7	17-	9.7

TABLE VIII - FIGURE I

C.I.R.C.E. PRE-POST MEASURE OF ATTITUDINAL CHANGE
BLACK AND WHITE PARTICIPANTS
(Based on Average Responses)



EVALUATION OF THE 1970 SUMMER RESEARCH TRAINING INSTITUTE

"Planning for Educational Decision-Making in the 70's"

July 6 - August 14, 1970

SECTION II

PROCESS EVALUATION

PROCESS EVALUATION*

In carrying out the evaluative functions of the 1970 HEW Institute at UNH, CIRCE employed several information-gathering techniques. For the process evaluation, they relied on two major sources of information: several one-to-three-day on-site visits by the evaluators to the Institute, during which they observed, listened, and probed; and a Weekly Participant Opinionnaire, by means of which they obtained systematic feedback from the participants about their reactions to each week's activities. (A copy of this Opinionnaire and all other instruments used in their evaluation will be found in Appendix B to this report.) An early expectation was that the participant observers would provide the evaluators with a third kind of information through a series of regular reports.

For a summative evaluation, they made use of some of the "process" information obtained during the course of the Institute but incorporated other data gathered by means of (1) an Orientation to Evaluation scale given at the beginning and again at the end of the Institute, (2) "self-interviews" from the instructional staff (consultants), and (3) a Summary Opinionnaire. Copies of these instruments are also included in Appendix B. (On the Summary Opinionnaire, frequencies of responses to the various alternatives have been provided.)

*This section is being presented as information relative to a process evaluation of the 1970 HEW Institute. The process evaluation was contracted to the Center for Instructional Research and Curriculum Evaluation, College of Education, University of Illinois, Urbana, Illinois 61801. It should be noted, that the italicized section which follows is a condensed version of the CIRCE Final Evaluation Report.

ADMINISTRATIVE STAFF

In any educational endeavor, some things are done right, some wrong. The former tend to get overlooked, the latter overemphasized. Although we have tried in this report not to overlook the things that were done right and not to overemphasize the things that were done wrong, it is unlikely that we have been completely successful.

The Institute staff -- Elwell, Barnes, Olivier, and others from the University of New Hampshire -- did an excellent job of recruiting top-quality participants in a very short time. The "General Information Handbook," designed by Elaine Gardner, Institute secretary and technical staff assistant, and issued to all participants and consultants, was also a very thoughtful and useful document insofar as it provided general information to the participants and instructional consultants about the Institute and the local area.

Throughout the Institute these administrative staff members showed themselves to be energetic, patient, and attentive to and concerned about the needs and desires of the Institute participants. In support of this statement, we have participant opinions on the weekly opinionnaire to the effect that the staff was available to talk to whenever necessary, particularly from the third week on. (During weeks one and two of the Institute four participants were less than satisfied with staff availability but from that time on everyone agreed that the staff was indeed readily available.) Similarly, participants said the staff was paying enough attention to the important problems that arose although a couple of participants were never

satisfied in this respect. Participants also felt that the staff had taken appropriate actions to resolve problems as they arose. Finally, on the Summary Opinionnaire, 21 participants rated the staff as "Good" or "Excellent" while three rated them as "Poor" or "Bad." Briefly then, it seems that the Institute staff did an excellent job of making themselves available to listen to -- and at least gave the appearance of acting to correct -- the problems of the participants as they arose during the course of the Institute.

An important component of the duties of the staff of a summer institute, however, is to facilitate the smooth flow of the instructional component of that institute. THIS IS PARTICULARLY IMPORTANT IN AN INSTITUTE ORGANIZED LIKE THE ONE IN NEW HAMPSHIRE WHERE PARTICIPANTS -- IN A TOTAL OF SIX WEEKS -- ARE EXPOSED TO SEVERAL HIGH-POWERED "EXPERTS," EACH OF WHOM HAS A UNIQUE TOPIC TO PRESENT AND A UNIQUE METHOD FOR PRESENTING THAT CONTENT. If the presentations of guest consultants are to be "relevant" to the theme of the institute and to the needs of the participants, if the transition from consultant to consultant (topic to topic) is to be accomplished smoothly, and if time-consuming and threatening confrontations of participants and consultants are to be minimized, it is imperative that the permanent administrative staff of the institute take strong positive action. What kinds of actions might serve to facilitate the flow and transition of instruction? First, it would seem necessary that participants be given some advance information about each consultant. This might include an overview of the content of his presentation (perhaps consultants -- as a part of their responsibilities to the institute -- should prepare such overviews themselves) several days before the consultant is scheduled to "perform." In addition, it might help the participants if

they were to receive a brief vita of each consultant. Activities like these last two would give the participants some idea about what the consultants were going to present, thereby alleviating some of the anxieties. (That such anxieties among participants did in fact exist in the New Hampshire Institute is reflected in reports from the participant observers during the early parts of the Institute and in some of the comments made to the evaluators during site visits.)

Equally as important as preparing the institute participants for the consultants is the task of preparing the consultants for the participants. That is, consultants should be provided -- in advance -- with information about the institute participants: their backgrounds, job descriptions, purposes in attending the institute, and any information available about what to expect by way of group dynamics during the institute. (This latter item will be most useful to the second and subsequent consultants.)

If the kinds of information described in the previous two paragraphs had been available during the New Hampshire Institute, it is likely that many of the consultant-participant conflicts could have been avoided. It is on this issue that the administrative staff of the New Hampshire Institute should be taken to task. True, the Institute staff was handicapped by a lack of time between date of funding and the start of the Institute. True, the Institute director stepped in at the last minute to replace the person who had planned the Institute, with a very different philosophy and a very different administrative style. Nevertheless, the important task of preparing participants for the consultants and consultants for the participants could have been better handled. The lateness of funding undoubtedly was a factor here.

In spite of the above comments, this report would not be complete or fair without mention of one outstanding counter-example. After two and one-half weeks of the Institute, it was apparent that consultants could not come in and "do their thing" for their alloted time without careful consideration of the needs and desires of the participants. On the basis of the experiences of Cook and Walbesser, the Institute director made a personal visit to the next consultant, Daniel Stufflebeam, several days in advance of his scheduled participation in order to describe to him the kinds of difficulties the first two consultants had experienced. On the basis of that advance notification, Stufflebeam made some modifications in his proposed method of operation for his two-week segment.

STAFF: PARTICIPANT OBSERVERS

Two participant observers, one black and one white, were recruited for the New Hampshire Institute. Their primary allegiance was to the Institute director although it was anticipated that their observations would also be of considerable use to the evaluators. That they fulfilled their primary role -- that of monitoring and reporting to the Institute director the feelings of the participants about the Institute -- can be attested to by the administrative staff. That they were of less use than anticipated in their secondary role -- that of providing useful information to the evaluation team during the Institute -- can be attested to by the evaluators. This lack of utility to the evaluators of the participant observers raises some important questions about how evaluators can obtain the most benefit -- or <u>any</u> benefit -- from the presence of such observers. These questions will be considered later in this report.

An important factor to consider in the use of participant observers is the careful specification of their role in an institute. Are they to be primarily participants? Or primarily observers? It is likely that this question will answer itself, given the context in which the participant observer is functioning and his personality. It is also important to consider the unwanted side effects of the presence of participant observers. In the New Hampshire Institute there was some early resentment on the part of some participants to the presence of the observers, especially in the residential setting. As one participant remarked, "It gets annoying to have someone looking over your shoulder while you're eating dinner, noting who you are talking to and what you are saying." Yet, from the point of view of the Institute staff, the information gleaned by a participant observer in that setting was and is an invaluable asset to on-going operations and administrative decision making. Related to this last point, on the Summary Opinionnaire fifteen participants rated the participant observers as good, eight were uncertain, and the other five gave decidedly negative responses. In the context of generally positive reactions to the Institute, these responses represent what might be significant dissatisfaction. Unfortunately, perhaps, it is impossible to differentiate between the two observers to determine whether either or both represented a source of dissatisfaction.

CONSULTANTS

The prospectus for the New Hampshire Institute indicated five major instructional components: Week One -- Desmond Cook on project management models and techniques; Weeks Two and Three -- Henry Walbesser and staff on behavioral objectives, design of assessment tasks, and construction of learning hierarchies;

Weeks Four and Five -- Daniel Stufflebeam, Egon Guba, and Robert Hammond on evaluation models and techniques, seminars on problematic simulations; and Week Six -- William Asher and Daniel Heisey on problems associated with developing, disseminating, and adopting educational innovations. This lineup was described in the planning group meeting prior to the Institute (May 24) as a "parade of stars."

It is the impression of the evaluators that many of the problems arising from consultant-participant or consultant-staff encounters in the New Hampshire Institute resulted from the fact that the two group combinations held very different sets of expectations as to what the Institute was all about. The consultants, who had had much experience with (traditional) summer institutes, came with the expectation that they were going to spend one or two weeks "doing their thing." The participants, many of whom had not been initiated into the fraternity of summer-institute attenders, came looking for material which would be directly relevant to them as they performed in their professional roles "back home." Because the participants, as a group, were extremely heterogeneous with respect to what was "relevant to them", their individual expectations were impossible of fulfillment in the context of the Institute. Because the first two consultants were not initially aware of (1) the diverse nature of the group and (2) the expectations of the participants, they had no chance even to attempt to meet those expectations.

Given that it is impossible to control the personal style of consultants, it is imperative that the administrative staff of an Institute such as this one work to insure that confrontations are avoided <u>or</u> consultants are prepared for them.

How did the participants themselves react to these events? Data relevant to this question can be gleaned from the Weekly Participant Opinionnaires. First, did participants enjoy the instructional staff (consultants) each week?

	Yes	Yes but...	No
Week One (Cook)	16	9	2
Week Two (Walbesser)	15	2	7
Week Three (Walbesser)	19	3	4
Week Four (Stufflebeam)	25	2	-
Week Five (Stufflebeam, Guba and Hammond)	27	-	-
Week Six (Asher, Heisey)	NO DATA COLLECTED		

Clearly from this point of view, Week One was not bad, Week Two not too good, Week Three pretty good, and Weeks Four and Five excellent.

But there are other aspects of these instructional blocks which must be considered. Whether or not a participant enjoyed the consultant)s) for a particular week, did he learn alot? Observe:

	Yes	Yes but...	No
Week One	17	4	3
Week Two	13	3	6
Week Three	11	5	8
Week Four	20	5	-
Week Five	27	-	-

As anticipated, there is a good bit of consistency in the distribution of responses to these two questions.

It was during the third week of the Institute that the director, Elwell, met with Stufflebeam. As a result of that meeting, Stufflebeam made an effort to adapt to the needs and desires of the participants. Among his more successful tactics were (1) requesting that the participants tell him what kinds of problems they were concerned with and would like help on; (2) setting up small-group sessions focusing on common problems; and (3) appointing, after consulting with the Institute staff on the Sunday evening preceeding his first instructional day, an "advisory group" of participants to assist in planning the week's activities. One of the evaluators (Wardrop) was present during Stufflebeam's initial encounters with the participants. It was that evaluator's opinion, that once Stufflebeam had taken those three initial actions, he could proceed in whatever manner he chose with the full compliance of the participants.

PARTICIPANTS

A leitmotiv throughout the New Hampshire Institute was the interplay of the diversity of backgrounds, abilities, responsibilities, and concerns of the participants. Such heterogeniety was built into the Institute by the criteria for selection of participants in the original proposal. The Institute was to serve graduate students, LEAs, and personnel in state and federal agencies and was to include specifically ten southern blacks. As a consequence of the selection process, the Institute wound up with 29 talented (for the most part), concerned (without exception), and aggressive (in comparison with other groups in previous institutes) participants. Such a mix was perhaps the single most important causal factor in the unfolding story of this Institute. It created problems for the consultants from the very beginning:

> *[One of the Institute's greatest weaknesses was] the heterogeniety of the group in both background experiences and educational levels. (Consultant A)*
>
> *[One of the Institute's greatest weaknesses was] the diversity of the purposes for which the participants were attending the Institute....(Consultant B)*
>
> *[One of the Institute's greatest weaknesses was] heterogeneous participants. (Consultant C)*
>
> *[One of the Institute's greatest weaknesses was] too much variance among the participants in both motive for attending and academic ability. (Consultant D)*

Based on experiences in this Institute (and elsewhere), we feel impelled to raise some important questions about the nature of the selection process. These questions will be considered in a later section of this report.

INSTRUCTIONAL CONTENT

Just as diversity characterized the participants in the New Hampshire Institute, so the cry for relevance characterized their feelings about the instructional program of the Institute. "Program management," "behavioral objectives," "learning hierarchies," "the CIPP evaluation model," and "comprehensive achievement monitoring" are fashionable among educational researchers and theorists; but some participants in the New Hampshire Institute could not see the possibility of applying these techniques and procedures to the problems with which they were themselves concerned. They did not -- many of them, at least -- want their time "wasted." Whether this was the feeling of the majority of the participants does not matter for it was the feeling of at least a very vocal group.

This cry for "relevance" created some unique problems because what was relevant for any half-dozen participants was not for the remaining twnety-two. Given the diversity of the participants, satisfying a demand for relevance of the instructional program simply was not possible. The only course of action which had hope of succeeding was individualization of instruction. But total individualization was itself not feasible, given the limited amount of time and energy of any one of the consultants. It was most nearly approached during the fifth week with Stufflebeam, Guba, and Hammond as an effective instructional team. Inadequate knowledge -- on the part of both staff and consultants -- of the backgrounds and interests of the participants was another limiting factor. The participants and participant observers were themselves aware of this limitation, as evidenced by their suggestions for "pretesting" the participants in order to place them in small groups for certain parts of the instructional program.

Both the cry for relevance and the desire for individualized or small-group instruction had their counterpoints, however. In the former case it is important to keep in mind the viewpoint expressed by one of the participants (addressing Stufflebeam): "I came here to learn...to hear and learn. I might not know what you're talking about, I might not understand you, but whenever you're talking, I'll be sitting there listening." For people like this one, the exposure to the "stars" was important. Relevance, for him, was not a primary criterion. In the latter case (individualized or small-grouped instruction), an interesting and puzzling phenomenon occurred: When Stufflebeam in Week Four strove valiantly to divide the participants into small groups, with at least a modicum of commonality of interest and

concerns within each group, he met with resistance. He found that only if he personally would meet with every small group would many of the participants accept that approach to instruction. Everyone -- or nearly everyone -- insisted on being where Stufflebeam was lest they "miss something." Does this phenomenon have some implications for the kinds of selection strategies and criteria which ought to be built into institutes?

Questionnaire responses provide further information about the reactions of participants to the content of the instructional program. Perhaps the most important question in this realm -- on a week-to-week basis, at least -- asked if the week's content had been challenging and important. The week-by-week responses were as follows:

	Yes	Yes but...	No	Don't Know
Week One (Cook)	18	9	-	-
Week Two (Walbesser)	15	6	3	1
Week Three (Walbesser)	14	7	6	2
Week Four (Stufflebeam)	21	5	-	-
Week Five (Stufflebeam, Guba and Hammond)	24	-	-	1

With the exception of Weeks Two and Three, all participants responding to the questionnaires felt the material presented was both challenging and important. Virtually the same distribution of responses was found for an indirect question about the relevance of the instructional content each week; vis. "Would your professional peers back home be interested in what you learned this week?"

Several questions in the weekly opinionnaire were designed to elicit participant self-evaluations of their learning each week. After all, for participants to benefit from the instructional content of an institute, they

must master at least part of that content. The first of these questions -- "Did you learn a lot this week?" -- yielded the following responses:

	Yes	Yes but...	No	Don't Know
Week One	17	4	3	3
Week Two	13	3	6	2
Week Three	11	5	8	2
Week Four	20	5	-	2
Week Five	27	-	-	-

(The pattern is familiar by now). As a participant, you may feel you have learned a lot but "Do you think you could teach another group what you have learned this week?"

	Yes	Yes but...	No	Don't Know
Week One	11	10	2	2
Week Two	14	3	1	5
Week Three	12	7	7	1
Week Four	18	3	3	3
Week Five	9	12	2	2

The participants are telling us something here. Yes, they have indicated, we have learned a lot. No, they continued, we are not as confident that we could teach it to someone else. (Week Five deserves special attention in this regard. The primary instructional activity that week was an elaborate simulation exercise, one which would require much greater understanding of content and a not-insignificant set of materials in order for anyone to attempt to use it with another group. It is not at all surprising that the participants,

who were unanimous in indicating that they had learned a lot, were much less confident that they personally could teach what they had learned to others.)

Other questions on the weekly opinionnaires were designed to get at participants' affective reactions to the week's instruction. Paralleling the earlier question about participants' ability to teach the week's content to another group is the question which asks "Would you want to teach another group what you have learned this week?" By week, the responses to this item were:

	Yes	Yes but...	No	Don't know
Week One	16	5	-	5
Week Two	12	2	6	4
Week Three	12	2	8	4
Week Four	13	9	2	2
Week Five	18	4	2	2

There is a great deal of agreement between responses to this item and responses to the earlier one. There are a couple of notable exceptions, however. Participants were generally uncertain about their ability to teach the materials presented in Weeks One (Cook) and Five (Stufflebeam, Guba, and Hammond's simulation); but in both cases they expressed a desire to do so. In contrast, participants were, as a group, more confident that they could teach the material of Week Four (the Phi Delta Kappa approach to evaluation) than they were interested in doing so.

Another approach to obtaining affective reactions to the material presented was through a question about participants' willingness to recommend that the materials be used in other summer institutes:

	Yes	Yes but...	No	Don't know
Week One	19	4	2	-
Week Two	6	7	7	4
Week Three	13	6	4	3
Week Four	19	5	-	3
Week Five	26	1	-	-

It is apparent that the materials from Weeks Two and Three were unpopular. How much of this reaction should be attributed to the participants' negative reactions to the consultant for those weeks is of course impossible to determine. It should be noted, however, that some of the comments we received were directly critical of the materials themselves. ("Turned off by instructional material." "Redundant and unimportant." "Needed revision and re-editing.")

In an institute characterized by a "parade of stars", special attention must be paid to the problem of transition from one topic to the next, from one consultant to the next. That this need went unmet in the New Hampshire Institute is clear. When asked if the transition from previous weeks of the Institute was satisfactory, participants at the end of Week Two (the transition from Cook to Walbesser at the beginning of that week) were evenly split: 10 said it was, 10 said it was not. Similarly, the transition from Weeks Three to Four (from Walbesser to Stufflebeam) was seen as "satisfactory" by 15 participants and as "unsatisfactory" by 10 others. Throughout the Institute, participants

were uncertain about what to expect from each new consultant, consultants were unaware of what their predecessors had done or what their successors were going to do. Once again, the administrative staff of the New Hampshire Institute must be taken to task for failing to handle this very important aspect of the Institute. [Note: Consultants did not (in general) share materials/outline as "promised" at May 24, Washington, D.C. conference.]

Participants were asked at the end of the Institute to make some judgments about the relevance, value, and transportability of the various components of the Institute. For each of the four components of the Institute, over three-fourths of the participants agreed that the material presented could have considerable applicability (this in spite of all the concern about relevance) and that they personally would be able to put the materials to good use. The majority of the participants also felt that the materials for all components except that involving Stufflebeam (Weeks Four and Five) would be "readily transferrable to other Institutes as an instructional package without requiring that the consultant(s) who presented it here be involved." In direct contrast to this reaction, fewer than half of the participants "would recommend that my colleagues attend a workshop or institute which had this topic as its central focus" except for that component involving Weeks Four and Five. For this presentation on evaluation models and techniques, all but one of the participants responding to the Summary Opinionnaire would encourage colleagues to attend such a workshop or institute.

THE INSTITUTE AS A WHOLE

This section is simply a cataloging of some of the summary impressions of the participants about the New Hampshire Institute. First, the Institute achieved its objectives "fairly well" or "very well" for nearly all participants. In retrospect, materials in all components were seen as somewhat-to-very relevant (although the behavioral objectives/learning hierarchies component was rated notably lower than the other three in this respect.)

Participants also felt that the content presented was both practical and feasible and that their competencies to conduct evaluation studies and to develop and implement sound decision-making strategies had been enhanced. Finally, after all -- well, almost all -- was said and done, only two participants indicated that their overall reaction to the Institute was unfavorable.

APPENDIX A

PRODUCT EVALUATION

FILMED FROM BEST AVAILABLE COPY

HEW INSTITUTE

U.S. Office of Education, Title IV

Planning for Educational Decision Making in the 70's

(a national doctoral and post-doctoral program)

Project Management Techniques; Behavioral Objectives and Assessment; Educational Evaluation Models; Problematic Simulation; and Development, Dissemination, and Adoption of Educational Innovation

Bureau of Educational Research and Testing Services
Durham, New Hampshire

July 6 through August 14, 1970

Dr. Daniel Stufflebeam, in a program mission statement developed for Ohio State University, makes the following statements:

> "The tasks of educational development include efforts to understand the dynamics of educational change, to identify targets and criteria for improvement of educational systems, and to formulate, test, and integrate into the normal operation of systems improved programs or ways of operating which produce higher levels of systems performance . . . Increasingly, however, educational institutions are seeking highly qualified professionals in development specialties; persons with broad understanding of the operations of the education system with the ability to understand global problems of large systems, such as local school districts and state or national educational systems; and with the capacity to organize and operate staff activities in evaluation, planning, program management or research and development. These are newly emerging roles, not yet clearly or consistently defined, which represent efforts by educational systems to institutionalize mechanisms for orderly systems development."

It is to the training of these kinds of people that this Institute directly addresses itself.

THE INSTITUTE

The summer Institute, **Planning for Educational Decision-making in the 70's,** sponsored by the United States Department of Health, Education and Welfare will be held at the University of New Hampshire for a six week period, from July 6 to August 14, 1970.

Thirty-two participants comprised of doctoral and post-doctoral candidates from throughout the United States and its territories will participate in an intensive, comprehensive program of study and training in the methodology and application of educational research.

The Institute will concern itself with the problems of training educators at the doctoral and post-doctoral level in the skills of project management, educational research, and evaluation—as aids in the process of educational decision-making.

The major themes of the Institute are:

1. The study of the problems inherent in the management of an educational evaluation project.
2. The study of the problems inherent in evaluating the particular curriculum changes with which the trainee is concerned.
3. The study of the major alternatives open to the educator in terms of educational research methodologies.
4. The study of the problems associated with the development, dissemination, and adoption process in the area of educational evaluation.
5. The study of communications techniques applicable to proper implementation of the decision-making process at various levels of the educational system.
6. The use of modern data processing equipment to facilitate the encoding and utilization of research data.
7. The reading of current educational literature relevant to the research project with which the trainee is involved.

Program and Consultants

Participating in the Institute will be the following personnel: Director: **Albert Elwell,** Bureau of Educational Research and Testing Services, University of New Hampshire.

Consultants: **Desmond Cook,** Educational Program Management Center, Ohio State University, and **Gregory Trezebratowski,** Ohio State University, who will lead the sessions concerned with project management.

Henry Walbesser, University of Maryland, who will direct the study of the construction of behavioral objectives and the design of assessment tasks, the construction of learning sequences, and a study of their empirical foundations.

The third section of the Institute will focus on the construction of behavioral objectives. It will be instructed by Dr. Walbesser with the assistance of **Leonard Cahen,** Educational Testing Service, Princeton, New Jersey; and **William Gray,** of the Maryland State Department of Education.

The study of different models to evaluate education will be directed by **Daniel Stufflebeam,** Evaluation Center, Ohio State University; and **Egon Guba,** Associate Dean, School of Education, Indiana University.

Dr. Stufflebeam will conduct a series of seminars concerned with problematic simulation, with the assistance of **Robert Hammond,** Ohio State University, and Dr. Guba.

The final sessions of the Institute will be devoted to an intensive discussion of the problems associated with the actual development, dissemination, and adoption of educational innovations, directed by **William Asher,** Purdue University, and **Daniel Heisey,** Whittemore School of Business and Economics, University of New Hampshire.

Sarah Curwood, Chairman of the Department of Sociology at Knoxville College will act as a special consultant to Southern black educators in an introductory week of seminars.

HEW Institute

Planning for Educational Decision Making in the 70's

Application Form

(detach and mail before June 1, 1970)

name _____

address _____

_____

zip code _____

home phone _____

age _____ u.s. citizen? _____

number of dependents (excluding yourself) who were claimed on your last federal income tax return (you may not claim any dependents if you filed a joint return and were not the major wage earner) _____

_____

are you presently employed in a school, system, or college and/or employed by title I or title III?

yes _____ no _____

(if not presently employed in a school, system, or college and/or employed by title I or title III, omit the items on this page, go on to next)

school name _____

address _____

_____

zip code _____

school phone _____

type of school (technical institute, elementary, junior high, etc.) _____

number of students enrolled _____

name of supervisor _____

your position _____

if you are preparing for a different assignment, specify here _____

_____

summarize your years of teaching experience and related work:

subjects or assignments	level	years

list your places of employment in teaching or related work in the past five years:

place	address

what colleges or universities have you attended (most recent first):

date	institution	degree	major

4

list all undergraduate and graduate courses in evaluation and measurement:

_____ _____

_____ _____

_____ _____

what teaching certificates or other credentials do you hold? _____

_____

describe any other significant academic experiences you have had in the subject field of this summer institute _____

_____

list the professional organizations in which you hold membership _____

_____

are you applying for any institutes or fellowships in addition to this one? _____

if yes, specify _____

I certify that the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

date _____ signature _____

Academic Credits

Six hours of graduate credit will be awarded for the successful completion of the Institute. The participants may apply these credits at the doctoral or post doctoral level—Credits will be awarded according to the following prospectus:

Education 881, (4 credits), **Methods and Techniques of Educational Research.** This course is a critical study of the principal methods employed in the investigation of educational problems and an evaluation of the procedures and standards used in reporting the findings; designed as an advanced course for candidates for graduate degrees.

Education 895, (2 credits), **Research Problems in Education** is concerned with the individual investigation of a problem in the area of educational research. This course will be used first to expose the trainees to a variety of educational research efforts. In the latter portion, each trainee will be expected to develop a research proposal which will have practical importance and relevance to his home district, or to evaluate a project presently being studied.

Stipends and Fees

Tuition and fees for participating members of the Institute are provided for under the accords of the HEW grant for the summer program.

Following acceptance, participants may receive a stipend of $75.00 per week plus $15 per week for each dependent for the period of attendance at the Institute. Stipends will be paid bi-weekly, on July 17, 31, and August 14. A maximum of 2.5 dependents will be guaranteed payment throughout the six weeks of the Institute. Additional dependency payment will be determined by the amount of funding available.

Participants will also receive travel expense payments for one round trip between their home and the University of New Hampshire. Textbooks and supplies normally associated with graduate programs will be purchased by the enrollee.

Since the success of the Institute will depend on the sharing of ideas, participants will be housed in one University residence hall and will have their meals in a reserved area of the dining hall. Participants will be requested to avail themselves of these facilities Mondays through Fridays, and will be responsible for their costs. The total charges for the six week period are as follows:

Single room and	15 meals/week	$228.00
	20 meals/week	264.00
Double room and	15 meals/week	210.00
	20 meals/week	246.00

A private Institute reading room will be made available in the residence hall.

Criteria for Admission

Institute applicants must be presently working in an approved Doctorate program in the area of Education and/or hold an earned Doctorate in the area of Education.

The applicant must also meet one or more of the following criteria:

1. He must be one of the personnel in any State Department of Education in the United States, having responsibility for school-related projects, or

2. A curriculum coordinator, such as an Assistant Superintendent of Schools, who has been designated a project director;
3. A member of Senior High, Junior High, or Elementary School staff responsible for implementing curriculum study;
4. A member of a college or university faculty or staff, serving as a research consultant to any public school system;
5. A staff member of a public or private school interested in developing research competencies;
6. An employee of an educational research laboratory or a research and development center.

Academic Criteria: The applicant must possess a Bachelor's degree from an accredited institution, evidence of satisfactory scholarship, and promise of ability to succeed at the graduate level. An undergraduate grade point average of 2.5 (on a 4.0 scale) will be minimum.

Teaching Experience: A minimum of two years in public or private school education and evidence of ability to provide leadership and responsibility in the area of curriculum research will be required. A letter of recommendation will be requested from the applicant's immediate superior indicating the meeting of these criteria.

The Institute will operate in compliance with the Civil Rights Act of 1964, which states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefit of, or be subject to discrimination under any program or activity receiving Federal financial assistance."

Application Procedures

Applicants to the Institute who fit the above-mentioned criteria will be selected for admission by a Selection Committee, comprised of individuals directly concerned with teacher preparation and research in education at the University of New Hampshire.

Applicants for admission to the Institute must return the enclosed Application Form to the Bureau of Educational Research and Testing Services no later than June 1, 1970. The Confidential Evaluation Form,

to be completed by the applicant's immediate supervisor must also be returned by June 1.

Accepted applicants and alternates will be notified by June 15.

A letter of acceptance from the selected applicants and alternates must be forwarded to the Bureau of Educational Research and Testing Services no later than June 22.

Recreational Facilities

The University of New Hampshire is located in the southeastern part of the state, near beaches, lakes, mountains, and resort areas. On-campus facilities include a modern student union building, swimming pool, tennis courts, and fully equipped field house. In addition, the University sponsors a summer theater, concerts, recitals, films, and other events. Within walking distance are shops, restaurants, and churches. The cultural centers of Boston are less than 70 miles away.

A weekly recreational schedule will be posted for Institute members; group activities may be planned according to interests expressed.

Calendar

June 1, 1970. Application Form and Confidential Evaluation Form to be returned to the Bureau of Educational Research and Testing Services, University of New Hampshire, Durham, New Hampshire, 03824.

June 15, 1970. Notification of acceptance to be sent to the accepted applicants and alternatives.

June 22, 1970. Letter of acceptance from the selected applicants and alternatives must be forwarded to the Bureau of Educational Research and Testing Services.

SOUTHERN BLACKS AND THE

NEW HAMPSHIRE 1970 SUMMER RESEARCH TRAINING INSTITUTE

Report Submitted

by

Dr. Sarah Curwood

Southern Blacks and N.H. HEW Institute 1970

My initial reaction to the HEW Institute directed through B.E.R.T.S. of the University of New Hampshire during the past three years was, if they are needed and are good for New England educators, they should be needed and good for Southern Black educators, accepting the multitude of lacks produced by long standing segregated school systems.

Although my initial concern with the black group to attend the institute centered around orientation to an anticipated new cultural milieu, my interest in their educational qualifications grew dominant as the recruiting progressed.

Advanced degrees for Southern blacks have traditionally been earned by hurdling many obstacles. Few black institutions conferred master's degrees; fewer yet, the doctorate. Most graduate work for Southern blacks had to be done away from home, usually at a new institution, often out of the South and usually predominatly white. Here the adequacy of their undergraduate preparation was critically assessed.

Much of the studying done for the master's degree, especially in education, was confined to the summer period. Doctoral degree programs with more stringent residence requirements often meant an up-rooting of the family with the usual problems of black relocation or a temporary splitting up of the family during the period of residency. The revealed and the hidden costs of a doctoral program were often not justified by the job opportunities available in the candidates' home community or elsewhere in the South or in the North.

If, inspite of these various obstacles, a Southern black successfully completed a doctoral program, he would tend to move into higher education.

So, in the credential game, blacks are most likely to presen t master's degree as their advanced degree, butressed perhaps with summer institues.

The following is my initial rationale for a week's orientation period for the Southern black participants in the HEW Institute.

1. To allow the black members time to become acquainted with each other without the presence of the whites and the pressures of learning.

2. To allow them an opportunity to relate to resident blacks and see the "black New Hampshire" living through their eyes. (See listT)

3. To have an opportunity through informal gatherings to express concerns relating to the program and their own situation.

4. To have an opportunity through ~~informal gatherings~~ formal meetings to express concerns relating to the program and their own situation.

5. To build mutual trust and confidence between the individuals and the staff of the Institute.

6. To ward off a "black caucus of protest" that often occurs in integrated settings that intentionally or unintentionally fail to meet the needs and abilities of black participants.

7. To establish a social climate that would maximize learning and mutual interaction and sharing.

The following flexible schedule was planned.

First day: Wednesday afternoon, arrival and settling in"

Wednesday evening, first orientation session at Stokes Hall -- discussion of New England and New England life, with special reference to New Hamp.

Second day: Thursday, breakfast at the Curwood Homestead. Emphasis on getting acquainted.

Thurs. afternoon - meeting on campus with Mrs. Adams, Office of Vice President
Mr. Johnson, admissions officer for black students

Discussion of black students on campus.

Evening meeting with black members of the wider community/recreation/theater etc.

Third day: Friday morning, Individual Interviews with Curwood

Friday afternoon; meeting with HEW Institute staff members

Evening free

Fourth day: Saturday, morning: Individual Interviews

Saturday afternoon: Area sight-seeing.

Saturday evening: BERTS, institute staff and participants picnic and supper at home of Jan and Herb Scheibel

Fifth day: Sunday morning: Church - sightseeing, beach, etc. and afternoon

Evening: Welcoming of other members of the institute.

The initial plans for orientation were severly modified.

1/ The lateness of recruiting early showed that a full work week period for orientation was impossible. The proposed five day period, starting on Wednesday would include the fourth of July holiday.

2. In spite of the later starting date, all of the participants did not arrive on time and some did not arrive within the disignated period when individual interviews were scheduledd Only six of the ten black participants were interviewed.

3. Two black participants, not part of the ten, and one paticipant from Guam participated in the full five day period.

Wednesday evening four persons met with me.

Thursday morning, five came for breakfast. This was a very pleasant experience. "Who knows whom" is an accepted and important disignation in Southern black groups that are criss-crossed by colleges attended, mutual friends, kinship and fraternal-ties. Several bonds of solidarity were forged. Information about New England and New Hampshire was given and information about participants was shared informally.

Friday's day, awaiting the arrival of more members, favored several informal relationships with Institutional staff members. By afternoon, I was able to interview two members. Saturday morning I interviewed two more. The picnic supper was held at my place. A friendly cooperative spirit prevailed as the five black members were joined not only by he Institute and BERTS staff members, but also by other early arriving white participants. I rejoined the group Sunday afternoon in time to welcome more black participants and to interview two more. During the institute, I met the rest of the black participants, took some sight-seeing in Portsmouth, but I did not have an opportunity to complete the interviewing.

List: potential guests.

Lena Coleman: Long time resident of Concord, N.H.

Melvin Bolden: Deck Road, Loudon, N.H. Politically active in the Democratic party.

The Bacon Brothers: of Pembroke, owner of a rug cleaning plant in Concord, N.H. Mrs. Bacon works for the Family Service Agency in Concord.

Clifford Lawrence of Andover, Mass.: works with the Deaf and Blind Children's Division in Concord.

The questionaire that the participants filled out sought background information about the participants spouse and parents to gain some small understanding of the present home-educational background and the possible childhood home-educational background of an adult engaged in education.

The interview schedule must be viewed as a preliminary form probing at generalized areas of concern that I thought might be relevant to help us understand the interviewee during a "committed to, but not actually in" situation as a base line for later comparisons.

The questions, I believe, are relatively self-explanatory.

The final sheet on which social interactions were recorded has potential for usefulness, but needs an improved format

The six interviews came from four states: Two from Tennessee, two from Louisiana (north - south), and one each from Mississippi and Texas. Three of the interviewees were males, three females. One was not married. Most (4), were between the ages of 42 and 47. One was over fifty - the other under 30. To round it out the average age was 42.

All interviewees are basically stabiles. All are living in the state where they were born; all received undergraduate education in their home state, half of the group did graduate study in their home state. Of the five who were married, four of their spouses were also born and educated in the home state.

All but one held master's degrees; four of them in education, one in history. One husband completed high school and one college. All three wives have college degrees - one a masters'.

A total of 9 children belong to the five who are married; one has four children, one teo and the rest have only one child.

The interviewees represented a rather immobile group of persons - well educated within their respective communities. The men are married to college graduate wives. The family size, with one exception, the farm family, is very small, but rather typical of the southern middle class Negro family, long represented in "school teaching".

The educational achievemant of parents, in general, is of a lesser level than that of their children. Only two of the interviewees had fathers who had completed college; only one had a mother who had completed college. One had a mother who attended college for two years, but whose father had completed high school. The education of the other four fathers was 7th - 8th (2), 4th (1), DK (1). Of the other four mothers, one completed high school, (2) 7th - 8th, and one DK.

If the five spouses' parents, three fathers and two mothers were DK's, two fathers and three mothers were 7th grade; the "children" have made big leaps compared with their parents.

#1 All but one of the interviewees saw themselves as having been recruite for the prgram by a black. The single one directly attributable to a white recruiter came about as an accident. (I mistook Texas A & M (predominantly white) for Prairie View (predominantly black).)

Two to three contacts - rather chain effect wer used to recruit. The process was much more time consuming than I had anticipated, but I feel we opened up new channels for future training. Much of what "happens" seems not to filter through to black educators.

Four of the participants were recruited mainly through college contacts; two, through state departments of education.

#2 All were pleased to be coming to the Institute. For the most part, it was an opening up of an unknown section of the country. Only one expressed mixed feelings of being maneuvered to come to used as a "symbol"

#3 Most cause professionally to learn and start or continue graduate work in a more challenging environment. Several were encouraged by supervising persons to come.

Personally most had a curiosity about a new section of the country. One had made plans for his family to share in the experience the last week - joining work and recreation.

#4 None, expect few logistic details.

#5 The shortness of the time between being accepted and having to come caused the most problems - for some it meant release from regular summer obligations, for one an actual salary loss and failure to complete one more course for certification (9 New Hampshire credits are not worth anything) - in this case. For one without charge cards, the actual money for travel was a big hurdle. The trip for the most part was very long and exhausting. The least number of problems were faced by those participants who knew in April that they would probably come.

#6 No one seemed to have a clear picture of what the experience would mean when they returned i.e. no clear responsibility "to take back" information. One member had relatively clear resposibility to the extent that most of the time he would be at the Institute, he should have been on the job. He came with the blessings of an active superintendent who could forsee benefits to the system from this experience. One interviewee is responsible for making a full report to the State Office of Education (black sector) and to talk to local groups about the experience.

#7 No one anticipated any problems when they returned to home base.

#8 Only one member seemed fully self-assured about being in the program. One covered self assurance or anxiety or both in a global willingness to learn what needed to be learned. The rest expressed in varying ways and degrees strong anxieties, principally that they would be pushed too hard, not allowed enough time to grasp information fatigue resulting from hard school year mitigated against pacing!!!! No real background in education was one participant's anxiety - certain fear too of the COMPUTER. But all were willing to learn.

#9 Unspecified research skills and computer skills were generally seen as prerequisites. But, again, willingness to learn came most often to the forefront.

#10 A certain feeling of "suspicion" evident in various ways came to the fore in the answering of question 10. The most extremes:

a. don't use it against me. People here may be okay but it's Federal material and the next person might not be okay.

b. don't use it to separate blacks from whites

c. don't degrade

Several generalized that "that is the way it should be." i.e. testing at any time. Overall, they viewed the testing as "partof the game" part of the price they would have to pay, to be in the program. (Resignation to fate!)

#11 The overall picture on intergation #------
12

Sometimes a black teacher is offered only one job - if she refuses --- out!

White teachers are resigning, but have other job options blacks do not possess.

If intergration is happening at all, it is to replace good black teachers with poor - less qualified white teachers. Non-tenure teachers may be moved. Theoretically teachers have a choice, but actually it's a Hobson's choice.

Five were quite mindful of intergration problems and relatively knowledgeable about them even when basically in a segregated situation. Only one seemed to just accept the status quo.

Two interviewees held dominant roles over whites, but only one real - the other one was "paper supervision."

#13 Integration had affected personally only two:

one was a principal with white teachers and the other one was moving from a pseudo-integrated situation to an all black one. Both were very aware of discrimination.

#14 Inter-racial contacts in South

1. Trades people only - white --- limited area

2. Wide experiences

   a. Educational meetings - white black

   b. Black friends in Boston and Massachusetts

   c. Integrated church

   d. Studying at "white" institution

   e. School and political contacts (money from black teacher for NAACP)

   f. Supervisor in army school -- wide contacts -- black - white

   g. 6 week institute N.Y. teacher coming in

      health program --- <u>not for BLACKS</u>

   w hite grad school family white

In general, wider contacts with whites, northern blacks seemed to depend largely on out of south contacts

1. Contacts maintained with migrating blacks.

2. Sufficient ranking in educational system to be allowed to attend wide range of professional meetings.

3. Broading experience

   a. army attached to educational unit.

   b. graduate study in white institution

4. Job experiences

   - southern whites.

1. How did you hear about the institute?

2. What was your initial reaction?

3. People came to Institues for a variety of reasons:
   a) What was your major professional reason?
   b) What was your major personal reason(s)?

4. What influence did personalized contacts with administrators of the Institute have on your decision?

5. What problem situations did you encounter?
   a) release
   b) transportation
   c) finances

6. What will be expected of you after your return from the Institute?
   a) from your employer?
   b) from yourself?
   c) from your family?

7. Do you anticipate any problems when you return:
   a) working relationships?
   b) inter-personal relationships?

8. What anxieties do you feel about the adequacy of your background for success in the program as you now understand it?

9. What are the skills and knowledge you now perceive as essential?

10. How difficult is it for you to view a testing program as a diagnostic tool for small group planning rather than as a judgment as personl deficiency?

11. What is the condition of schools integrated in your area?

12. How is it affecting black teachers and black administrators?

13. How is it affecting you personally?

14. Some people believe that degrees of intergation between whites and blacks are essential as knowledge is dispersed from center of understanding such as this University through this Institute. While mere contacts between diverse seeking common knowledge are not a panacea for our social ills. The absence of contacts blocks even the potenial for understanding. I am interested in the experiences of social inter-action you have had with southern and northern whites and southern and northern blacks in various regions and under varying circumstances.

PRE-TEST AND POST-TEST FOR
PLANNING FOR EDUCATIONAL DECISION-MAKING IN THE 70'S

I. Fundamentals

1. The most marked difference between "basic" and "applied" research in education is in the extent to which

   a. control and precision are emphasized.
   b. the Hawthorne effect operates.
   c. implications are drawn concerning school practice.
   d. theoretical constructs are tested.

2. The major difference between pure and applied research is the

   a. use of research design.
   b. methods of population selection.
   c. stability of conclusions reached.
   d. application of the findings.

3. Which one of the following defects is almost impossible to remedy in the process of problem-solving <u>through personal experience</u>?

   a. Subjects and situations are probably not typical.
   b. Assumptions are not identified.
   c. Meanings are not defined.
   d. Processes of solving are not replicable.

4. Which one of the following "methods of knowing" is most characterized by self-correction?

   a. tenacity
   b. authority
   c. <u>a priori</u>
   d. scientific

5. Which of the following is the least important aim of "pure" research?

   a. control
   b. prediction
   c. systematization
   d. application

6. The aim of theory is the explanation and prediction of phenomena.

   a. True
   b. False

7. Which one of the following best describes induction?

a. Specific to general.
b. General to specific.
c. Specific to specific.
d. General to general.

Read the quotations in items 8-10 below. What source of knowledge is represented by each statement? Use the following key:

a. authority
b. inductive reasoning
c. deductive reasoning
d. tradition

8. Mrs. Adams said "I know that the children in the Head Start program have been given considerable practice in reading readiness skills. Since it is known that practice improves these skills, it figures that those children who have participated in Head Start will be superior in reading readiness."

9. Miss Brown replied, "I don't believe that. Our principal says the Head Start program did no one any good. Therefore, I expect the Head Start children to be no better on reading readiness than the other students."

10. Mrs. Carter said, "Let us examine and measure the children on reading readiness in every way we can to determine whether the Head Start children do better or not ."

11. One difference between the experimental and descriptive methods in research has to do with the

a. setting of the study.
b. control of variables.
c. number of subjects.
d. recording of data.
e. time span of the study.

12. The most important characteristic of the experimental method is

    a. the repetition of observations.
    b. the control and systematic variation of the conditions of observation.
    c. the making of exact measurements.
    d. the concept of correlation.

13. An investigator was interested in studying teacher-success. He selected two groups of teachers: one that was highly successful and one that was not too successful. He found that the more successful teachers tend to be more out-going, more independent, and more interested in people than less successful teachers. The type of design used in this study was

    a. experimental.
    b. ex post facto.
    c. longitudinal.
    d. correlational.
    e. cross-sectional.

Midland Central School District has recently adopted the "new math" into its program at the 7th grade level. It is now interested in a study of 6th grade students in order to evaluate the effects of the new method. One hundred students were included in the study, 25 from each of the four elementary schools in the district. The 25 students from each school were identified and included in the study in such a way that all students in the 6th grade in each school had an equal opportunity to appear in the 25 from each school. The total of 100 students were then placed into three testing groups by a method which assured that there would probably be no differences between these three groups in terms of extraneous variables. This was done so that three different forms of a standardized achievement test could be used and compared. The students were then administered the tests. The results were analyzed and conclusions drawn concerning the success of the new method with 6th graders in the school district.

14. Random selection was involved in

    a. placing students in each of the three testing groups.
    b. administering tests to the three testing groups.
    c. identifying 25 students from the 6th grade in each school.
    d. deciding to use modern math as an instructional method.

Suppose a researcher wanted to determine the effects on the attitudes of citizens toward centralized government of the electrical blackout which occurred November 9, 1965, in Northeastern United States. He hypothesized that those people living within the blackout area would be more opposed to Federal control, since a Federally initiated grid system allowed the blackout to spread from its origin and since these people were actually affected by the blackout. He selected a standardized, objective instrument to measure attitudes toward centralized versus local control. Assume that norms on this instrument were available for the nation as a whole, the blackout region and the region outside the blackout area. He selected .05 per cent random samples from the citizens 21 years of age or older living in the blackout area and from those living outside the blackout area. He administered and scored the instrument and tested the significance of the difference between average scores for the two groups. He found a marked difference: the persons living in the blackout zone were much more opposed to Federal control. He thus concluded that the blackout did in fact affect attitudes toward centralized government for those who actually experienced the blackout.

What major type of inquiry best characterizes the design of this study?

a. ex post facto research
b. true experimental research
c. sample survey research
d. attitudinal inventory research

. Which of the following problems would most require historical research?

a. trends in patterns of financing Georgia public schools
b. current concepts of "discipline" of public high school principals in Georgia
c. effects of "social acceptance" on tendencies to "withdraw"
d. the developmental needs of high school youth in Clarke County, Georgia

. Which one of the following is an appropriate step to take in the <u>external</u> criticism of an original document used in historical research?

a. determining who actually wrote the document.
b. establishing the author's possible motives for writing the document.
c. making a study to determine the author's meanings.
d. analyzing the author's possible bias.

18. One of the weaknesses of the historical method is that the researcher has available as data "selected conceptions of reality rather than reality itself." All of the following are implications of this weakness EXCEPT

    a. important facets of historical events may never be accessible to the researcher.
    b. the descriptions of reality available to the researcher may be inaccurate or in error.
    c. the findings of historical research must be considered undependable
    d. external and internal criticisms of the data are crucial to the success of the research.

19. When reading a research report in a respectable journal, we should

    a. accept the conclusions without question.
    b. accept the conclusions without question only if the author is a well-known authority.
    c. accept those conclusions that agree with our opinion.
    d. reject all conclusions if they are based on an inductive argument.
    e. evaluate the conclusions according to the correctness of the research methodology.

20. The acceptance of experimentation in education has been, according to Campbell and Stanley,

    a. increasing steadily over the past six decades.
    b. sporadic overall but highest in the 1920's and lowest in the mid-1930's.
    c. decreasing steadily over the past six decades.
    d. at a constantly high level over the past four decades.

21. A journal in which appear brief summaries of the substance of primary research completed within a selected broad division of education over a given period of time (e.g., three years) is the

    a. Review of Educational Research.
    b. Educational Abstracts.
    c. Journal of Educational Research.
    d. Educational Research Bulletin.

22. The most recent data regarding dependable knowledge in a given educational field are likely to be found in

    a. The Encyclopedia of Educational Research.
    b. A.E.R.A. Handbook of Research on Teaching.
    c. Yearbooks of the National Society for the Study of Education.
    d. current research periodicals.

23. In which one of the following would one find a critical review of the Iowa Test of Basic Skills?

    a. Mental Measurements Yearbook
    b. Encyclopedia of Educational Research
    c. Buros' Tests in Print
    d. Educational and Psychological Measurements
    e. Review of Educational Research

The following research resources apply to items 24 - 27 below:

1. Handbook of Research on Teaching
2. Encyclopedia of Educational Research
3. Review of Educational Research
4. NEA Journal
5. Readers Guide
6. Psychological Abstracts
7. Psychological Bulletin
8. Tests in Print
9. Mental Measurements Yearbook
10. American Educational Research Journal

In which would you look to find

24. A brief summary of the research on classroom organization:

    a) 1, b) 2, c) 3, d) 8, e) 9

25. To obtain a critical review of the Lorge-Thorndike Intelligence Test:

    a) 2, b) 3, c) 7, d) 9, e) 10

26. A general and complete summary of research within the last three years on "Educational and Psychological Testing":

    a) 1, b) 2, c) 3, d) 6, e) 9

27. A high quality publication of original research:

    a) 3, b) 6, c) 7, d) 10

II. Steps in the Process of Research

28. In conducting research, which of the following steps should generally be taken first?

    a. collection of data
    b. compilation of a bibliography of similar researches
    c. formulation of a working hypothesis
    d. careful formulation of the problem to be solved

29. A hypothesis is

    a. a general statement which has been proved.
    b. a general statement not subject to proof.
    c. a statement temporarily accepted as true.
    d. a statement considered as false until proved true.

30. The lowest level in the hierarchy of certainty of scientific knowledge is represented by the

    a. hypothesis.
    b. theory.
    c. law.
    d. principle.

31. A substantive or research hypothesis

    a. is directly testable.
    b. has to be translated into operational and experimental terms.
    c. is dependent on the statistical hypothesis.
    d. predicts how the analysis of quantitative data will be resolved.

32. The first step in the empirical testing of a research hypothesis is

    a. collecting relevant data.
    b. deducing consequences that can be observed.
    c. selecting or developing tests or observational systems that will provide data.

33. When a general problem of interest to an individual arises and he makes the decision to undertake a research project towards its solution, he must first identify

    a. the studies he will pattern his project after.
    b. the tests available to solve the problem.
    c. the variables inherent in the problem.
    d. the inference pattern related to the problem.

34. The scientist affords the facts a chance to prove or disprove something by hypothesizing in advance.

    a. True
    b. False

35. Hypotheses are statements about relations between variables.

    a. True
    b. False

In items 36-40 evaluate the adequacy of each statement as a scientific hypothesis by using the following key:

    a. Adequate hypothesis
    b. Inadequate, less than two variables
    c. Inadequate, no statement of relationship
    d. Inadequate, not testable

36. If programmed text materials are used to teach arithmetic drill materials, then mastery of the materials (90% or better on a criterion test) will follow.

37. If subjects vary in their level of anxiety (as measured by the M.A.S.), then they will differ in their achievement on a timed spelling test.

38. Frustration (produced by preventing children from reaching solutions to problems) produces agression.

39. If people are prejudiced, then they identify minority group members by their faces more readily than do unprejudiced people.

40. Group therapy (as opposed to non-group therapy) will result in individuals with more adequate value systems.

41. The report of a study began with this statement: "The purpose of this study is to determine the differences between 'under achieving' and 'normally achieving' students in the seventh and eighth grades with respect to variables in personality, aptitude, study habits, and home environment." Is the statement a hypothesis?

a. No, because the statement is not posed in the form of a question.

b. No, because it does not propose a relationship to be tested.

c. Yes, because it will lead to the testing of the significance of differences.

d. Yes, because it does refer to the main purpose.

42. Which of the following is a <u>necessary</u> characteristic of an adequately defined problem?

a. It is based on previous research.
b. It is developed from clearly defined objectives.
c. It is based on the analysis of data already available.
d. It leads logically to the listing of testable hypotheses.

43. The most important criterion for evaluating the procedures section of a research study is: Has the author explained his procedures in such a way that will enable the reader to _____ the study?

a. criticize
b. comprehend
c. statistically analyze
d. repeat
e. deduce consequences of

44. In selecting a group for a study, the initial step is to

a. identify all the units which compose the total population.
b. use a table of random numbers to help provide an unbiased sample.
c. provide for double-sampling techniques to insure a representative sample for study.
d. sample every odd number item and compare the obtained results with a sample of every even numbered item.

45. All of the following are dangers to be watched for and weaknesses to be corrected in the collection and analysis of data EXCEPT which one?

a. Are the data adequate?
b. Are the data carefully sifted and considered for accuracy and authenticity?
c. Do the data substantiate the hypothesis?
d. Does the evidence really mean what it seems to mean--are the conclusions sound?

46. The statistical methods to be used in a study should be considered

a. before the hypotheses have been formulated.
b. as the study is being designed.
c. after the data have been collected.
d. after the data have been tabulated.

47. A null hypothesis in a comparative experiment is

a. always false.
b. always the same as the research hypothesis.
c. a statistical hypothesis that assumes that the subjects in two treatment groups were equal before treatment began.
d. a statistical hypothesis that assumes there is a difference among the effects of treatments.
e. a statistical hypothesis that assumes there is no difference among the effects of treatments.

48. Defining "learn more" by a score on the Iowa Test of Basic Skills is a (an)

a. measured operation definition.
b. experimental operational definition.
c. constituted definition.
d. synonym definition.

Read and examine the following statement. For each term on the left, select the phrase on the right (taken from the statement) which correctly illustrates each term. Each phrase may be used more than once.

"What effects do socio-economic background factors have on students' ability in visual perception as measured by performance in the Renshaw Visual Acuity Test?"

49. dependent variable answer_____	a) socio-economic background factors
50. construct/intervening variable answer_____	b) ability in visual perception
51. operational definition answer_____	c) performance in the Renshaw Visual Acuity Test
52. independent variable answer_____	

III. Experimental Research

53. According to Kerlinger, one basic purpose of research design is

    a. to provide research questions.
    b. to suggest research problems.
    c. to control variance.
    d. to control independent variables.

54. The main technical function of research design in education is to

    a. control extraneous systematic variance.
    b. minimize error variance.
    c. maximize systematic variance.
    d. (b) and (c)
    e. all of the above

A sociologist surveyed, by means of a mail questionnaire, the attitudes of persons who managed a certain group of hotels and restaurants as to whether they would accept Indians as guests or customers. He then arranged for an Indian couple to visit these hotels and restaurants, and subsequently learned from the couple which establishments had actually served them. He found that of the establishments which had served the Indian couple, over 90 percent had previously stated they would not serve Indians.

55. Expressed attitude toward a course of action is not necessarily a reliable indicator of behavior.

    a. This conclusion is warranted by the study.
    b. This conclusion is not warranted by the study.

56. Surveys measuring expressed attitudes contribute little to the understanding of what people will do in everyday practice.

    a. This conclusion is warranted by the study.
    b. This conclusion is not warranted by the study.

57. Campbell and Stanley introduce McCall's work as

    a. an example of the best current thought in experimental design.
    b. a natural follow-up for the work done earlier by Fisher.
    c. an early yet insightful statement of fundamental design techniques and methodologies.
    d. an example of heavy reliance on designs of the pre-experimental type.

58. A sample is considered to be random if every element of the population has an equal and independent chance of being included in the sample.

    a. True
    b. False

59. Statistics is to parameter as

a. population is to sample.
b. sample is to population.
c. mean is to variance.
d. variance is to mean.

60. When a researcher states that a result is significant, he means

a. the effect is a practically important one.
b. the gain scores are not correlated.
c. the result is unlikely to be a chance occurrence.
d. the sample values are different.

61. The results of an experiment are said to be confounded when

a. they contradict previous research findings.
b. they are contrary to what was predicted.
c. they are unexpected.
d. the effects of the variables cannot be unambiguously evaluated.
e. the variables interact with each other.

62. Which of these terms least belongs with the others?

a. experimental design
b. randomization
c. correlation
d. manipulation
e. control

63. Of the following, the most important determinant of the extent to which the results of a research study can be generalized is the

a. nature of the sample used in the study.
b. adequacy of the instruments used to collect data.
c. degree to which the effects of extraneous variables have been controlled.
d. ease with which the research design can be replicated.

64. The major function of the control group in an experimental study is to measure the effect of

a. differences in difficulty of pre- and post- tests.
b. external factors upon the dependent variable.
c. interaction of group characteristics and experimental treatments
d. administration of a pre-test prior to application of the experimental treatment.

Use the following to answer questions 65-69.

A coach in a large high school thinks that ballet training will improve the batting average of his baseball team. He decides to have half the team take six weeks of ballet training before the baseball season begins while the other half does not take such training. He will then compare the season batting averages of group A, those with ballet training, and group B, those without ballet training, by comparing the mean of group A with the mean of group B.

65. This study would be classified as

a. a school survey
b. an ex post facto or casual-comparative study.
c. a correlational study.
d. a trend study.
e. experimental research.

66. In order to test his hypothesis, the coach should have which group take ballet training?

a. the best players
b. the poorest players
c. a randomly selected group
d. those who volunteer
e. good players who show poor coordination

67. The control group would be those who

a. take ballet training.
b. do not take ballet training.
c. try out for the baseball team.
d. have high batting averages.
e. are willing to cooperate in the experiment

68. The independent variable is

a. ballet training
b. batting average
c. runs batted in
d. the size of the school
e. the grades players make in ballet school

69. This study would be classified

a. one group pre-test/post-test
b. control group pre-test/post-test
c. control group post-test only
d. Solomon four group design
e. correlational study.

70. Suppose the group with ballet training completes the season with a higher mean batting average than the group without ballet training and statistical tests indicate that this difference is highly unlikely to be a function of chance. Assuming that no problems of internal validity are present, the coach should:

a. reject the null hypothesis.
b. reject the experimental hypothesis.
c. declare the experimental hypothesis is proven.

71. The external validity question in this study would be:

a. Was ballet training really responsible for the differences in batting average?
b. Was the coach unethical in making baseball players take ballet training?
c. Is ballet training worth the expense it involves?
d. Would ballet training improve the batting performance of other teams?

72. Hawthorne effect would be most likely to increase the scores of

a. the best players.
b. the poorest players.
c. the players with ballet training.
d. the players without ballet training.
e. all players.

73. One of the main reasons for working with <u>samples</u> rather than <u>populations</u> is that

a. populations, being finite, cannot be discussed in terms of intervals.
b. the experimenter, because of practical reasons, rarely can locate or test the population.
c. statistics are appropriate to use with samples but not appropriate to use with populations.
d. population measures are biased, whereas the repeated use of samples controls bias.

74. Which of the following precedures would yield the most appropriate data for studying the relation between intelligence and achievement?

a. administering an achievement test and an intelligence test to one sample of subjects.
b. administering an achievement test to one sample of subjects and an intelligence test to another sample of subjects.
c. administering an achievement test to a sample of subjects, all of whom have an I.Q. of 100.
d. administering an achievement test to 2 samples of subjects and an intelligence test to 2 different samples of subjects.

75. The entire collection of elements or measurements about which an inference is to be made is

    a. an experimental design.
    b. an interval estimate.
    c. a population.
    d. a sample.

76. Experimental and control groups are frequently equated by matching pairs of subjects on one or more variables (e.g., intelligence) and assigning one member of each matched pair to the experimental group and the other member to the control group. What factor is the most crucial in determining the effectiveness of this procedure for developing equivalent groups?

    a. whether the total group of subjects is a random sample from the population of interest
    b. whether equal numbers of males and females were assigned randomly to treatment or control groups
    c. whether the matching variable(s) are exclusively and highly related to the dependent variable of interest
    d. whether the study is experimental or _ex post facto_

77. Parameter is to population as

    a. statistic is to sample.
    b. sample space is to frame of reference.
    c. statistic is to probability.
    d. non-parametric is to parametric.
    e. statistic is to measurement.

78. If α and β are characteristics of population P, and if a and b are estimates of α and β on the basis of a sample, then

    a. α and β are statistics and, a and b are parameters.
    b. α and β are parameters and, a and b are statistics.
    c. α, β, a, b, are statistics.
    d. α, β, a, b, are parameters.

79. Which of the following terms best fits the following definition? "A conclusion about a population, made on the basis of what has happened in a sample of observations, the conclusion being drawn with a calculable risk of being in error" is a(n)

    a. population parameter.
    b. random selection.
    c. statistical inference.
    d. unbiased estimate.

Suppose you wish to compare experimentally the effects of two drugs on reaction time. You randomly select 30 patients from each of two hospitals. You administer treatment 1 to the patients in hospital A and treatment 2 to the patients in hospital B. You then test each subject individually on a single apparatus for measuring reaction time, compute the means and standard deviations for the two groups, and calculate a two tailed t test using the .10 level of significance.

80. What source of error is most likely to result from this design?

    a. Initial differences between hospitals could obscure differences between the effects of the drugs.
    b. Using only one testing apparatus prevents generalization.
    c. Comparing two treatments yields too little information; instead, each should have been compared with a control.
    d. The effects of one drug may interact with the effects of the other.

81. Is the statistical analysis appropriate?

    a. Yes, the t test will yield a valid estimate of the statistical difference between the test results for these samples.
    b. Yes, the t test will yield the information necessary for determining which drug is superior.
    c. No, a one tailed test is required.
    d. No, the .10 level of significance is too large.

82. Which of the following correctly states the extent of permissible generalization in the formation of a statistical inference? The generalization pertains to all individuals

    a. possessing characteristics similar to those used in the study.
    b. actually used in the study.
    c. suggested by a carefully developed analogy.
    d. from the population sampled.

83. Characteristics of persons or things which can assume different values are called

    a. distributions.
    b. observations.
    c. data.
    d. variables.

84. In an experiment to investigate the extent to which learning changes systematically with increasing age, the independent variable would be

    a. length of the list to be learned.
    b. age levels of those tested.
    c. change from trial and error to insightful learning.
    d. number of errors made on learning trials.

85. The handedness of a person is a (an)

a. continuous variable.
b. discrete variable.
c. independent variable.
d. dependent variable.
e. intervening variable.

86. In an experiment to determine the effect of the tempo of music on workers' productivity in a factory setting, the dependent variable is the

a. tempo of the music.
b. factory setting.
c. number of workers.
d. workers' productivity.

87. Which term least belongs with the others?

a. dependent
b. ordinal
c. response
d. criterion

88. A dependent variable is generally a classification variable which may be manipulated or controlled in an experiment.

a. True
b. False

89. The dependent variable is the treatment variable which the investigator varies for purposes of controlling the results.

a. True
b. False

90. Students taught first aid by programmed instruction will achieve at a higher level than those taught first aid by the traditional method. In the above hypothesis the independent variable is

a. students.
b. level of achievement.
c. programmed instruction.
d. method of instruction.
e. first aid test scores.

E plans an experiment in which 60 children are to be randomly assigned to four treatment groups: extrinsic reward (candy) and extrinsic punishment (loss of recess); extrinsic reward only; extrinsic punishment only; and neither extrinsic reward nor punishment. Before the study begins, E gives an IQ test to all the pupils to use in the statistical analysis, but not to be used in assigning pupils to groups. To determine the effect of the treatments, a geography test is given.

91. In this experiment, the assigned independent variable is

    a. treatment.
    b. IQ.
    c. geography test score.
    d. There is none in this experiment.

92. In this experiment, the active independent variable is

    a. treatment.
    b. IQ.
    c. geography test score.
    d. There is none in this experiment.

E plans an experiment to determine if use of certain specified amounts of a drug will increase the IQ scores differentially for male and female pupils. He uses fifth graders for the study.

93. In this experiment, IQ serves as

    a. an active independent variable.
    b. an assigned independent variable.
    c. a dependent variable.
    d. Both A and B are correct.

94. In this experiment, sex serves as

    a. an active independent variable.
    b. an assigned independent variable.
    c. a dependent variable.
    d. None of the above are correct.

95. In this experiment, the drug serves as

    a. an active independent variable.
    b. as assigned independent variable.
    c. a dependent variable.
    d. None of the above are correct.

96. The experimenter usually has as his objective the

    a. minimizing treatment or experimental variance.
    b. maximizing extraneous variance.
    c. minimizing error variance.
    d. None of the above.

The English department of the Sunbury Junior High School is concerned with improving the reading speed and comprehension of 7th graders. They have decided to conduct a training experiment utilizing the Tachitron and appropriate sets of training cards. While developing the design for the study, several important considerations were raised. First, it appeared crucial to be able to determine whether or not improvements in reading skill as noted through scores on a reading achievement test would in fact be due to the training. Second, it was also realized that in order to avoid mistakes and inconsistencies in grading, it would be important to develop an objective and accurate method of scoring the test. There was also concern about the effects of other factors on the results of the study. It was noted, first, that many of the students came from disadvantaged homes and had limited language experiences. Other students had come from a grade school system that employed a special training program in reading. The intelligence range of the students was quite wide and might also be an important factor.

97. In the above study, experimental variance would be found in

    a. intelligence test scores.
    b. scores on the reading achievement test.
    c. the research design of the study.
    d. the method of scoring.

98. Which of the following constitutes a type of error variance controlled in this study?

    a. socio-economic levels
    b. the initial low level of reading ability
    c. mistakes and inconsistencies in scoring the achievement test
    d. the training method

99. An example of an extraneous variable in the study would be

    a. previous participation in a reading training program.
    b. scores on the reading achievement test.
    c. the training method.
    d. mistakes and inconsistencies in scoring.

100. "A 'true' experimental design must incorporate pre-test." (In the Campbell & Stanley sense) This statement is

    a. true.
    b. false.
    c. usually, but not always, true.
    d. usually, but not always, false.

101. When a pre-test and post-test are used on all subjects in the experimental and control groups

a. the pre-test may influence post-test results.
b. the E knows whether it is reasonable to assume that both groups began at a similar point or not.
c. there may be interaction between pre-test and treatment effects.
d. a and b are both true.
e. a, b, and c are all true.

If Method A works better with bright (intelligent) students and Method B with dull students (as measured by the ABC test,) and the pattern is even more pronounced for boys than girls, we know:

Indicate True or False for items 102-107

102. Girls achieved better than boys.

a. True
b. False

103. The overall girl and boy means differed significantly.

a. True
b. False

104. There was a sex-by-intelligence interaction.

a. True
b. False

105. There was a method-by-intelligence interaction.

a. True
b. False

106. There was a method-by-intelligence-by-sex interaction.

a. True
b. False

107. The overall means for Method A and B differed significantly.

a. True
b. False

108. In the above factorial design, how many factors are there?

a) 0, b) 1, c) 2, d) 3, e) 4 or more

109. How many dependent variables are there?

a) 0, b) 1, c) 2, d) 3, e) 4 or more

110. Which type of sampling is used if the population is divided into groups by certain common characteristics and random sampling is done from each group?

a. cluster
b. systematic
c. stratified
d. proportional
e. double

111. A researcher draws a sample by selecting every 10th name in a telephone directory. Which of the following sampling types has he used?

a. simple random
b. double
c. stratified
d. systematic

112. If 50 students from a group of 200 7th termers were to be studied by the Rorschach technique, the sample (50) would be considered random if

a. there were the same number of boys and girls in the group of 50.
b. every boy and girl in the 7th term had an equal opportunity to be selected.
c. two students were selected whose names began with each of the 25 letters of the alphabet except X.

d. every IQ level (ex: 80-85,85-90,90-95, etc.) was equally represented by the 50 students.

113. Selecting the children to be involved in an experiment by randomly identifying the schools to be involved represents

a. stratified sampling.
b. double sampling.
c. systematic sampling.
d. cluster sampling.

114. Two characteristics of a random sample are: (1) independence of selections, (2) equal probabilities of selection.
a. True b. False

115. If a sample is large and randomly drawn, then it is quite likely it is representative of the population.

a. True
b. False

116. Random sampling guards against known and unknown biases.

a. True
b. False

117. Separating a group of possible subjects into categories (e.g. males and females) before selecting subjects (by use of a table of random numbers) to receive a particular treatment is known as drawing a

a. stratified random population.
b. simple random sample.
c. unbiased random sample.
d. stratified random sample.

118. When a sample has been drawn at random, we can still only make probabilistic statements about its relationship to the population from which it was drawn.

a. True
b. False

119. Selecting a sample at random means that

a. the sample drawn will definitely be representative.
b. every member of the group drawn from has an equal and independent opportunity of being selected.
c. Both A and B are correct.
d. Neither A nor B is correct.

120. A sample selected to assure that certain subgroups in the population will be represented in the sample in proportion to their numbers in the population itself is called a

a. random sample.
b. stratified sample.
c. pilot sample.
d. heterogeneous sample.

121. The most efficient means of ruling out factors such as maturational level, ability, age, etc., as rival explanations of an observed post-test difference between an experimental and a control group is

a. careful matching of the experimental and control groups on all possible factors (e.g., sex, IQ, and achievement).
b. a time-series quasi-experimental design.
c. random assignment of subjects to the treatment groups.
d. the administration of a pre-test.

122. An investigator wishes to evaluate the influence of three methods of teaching reading: the basal reader method, the I.T.A. method, and the individualized reading instruction method. In setting up his groups for study, he should be sure to

a. assign the children randomly to classes.
b. assign teachers randomly to classes.
c. assign the method of reading instruction randomly to classes.
d. all of the above.
e. none of the above.

123. In a large high school the 25 students who scored highest in an English pre-test were placed in a special class. At the end of one semester they were given another English achievement test. The mean grade level equivalents were compared for the two tests. This is an example of

a. one group pre-test/post-test design.
b. randomized control-group pre-test/post-test design.
c. randomized Solomon four group design.
d. randomized control-group post-test only design
e. factorial design.

124. The "halo" effect in rating refers to

a. influence of one rater upon another.
b. tendency to rate a person higher when you know him better.
c. spread of a general impression of a person to the rating
o of specific characteristics.
d. tendency to make ratings too high.
e. tendency not to be too hard in rating people one doesn't like.

125. Subjects performing well merely because they are being observed (and not necessarily because of any effect of treatment) are considered to be under the influence of

a. the Hawthorne effect.
b. the novelty effect.
c. the halo effect.
d. none of the above.

126. The internal validity of an experimental design is concerned with the question:

a. to what extent can the experimental findings be generalized?
b. did the independent variable really produce a change in the dependent variable?
c. how representative is the setting selected for the experiment?
d. will the findings provide information about situations in which variations of the independent variable are present?

127. When the results of an experiment are true only under certain very special conditions and do not generalize far beyond these particular experimental conditions, the experiment is said to have

a. low internal validity.
b. low external validity.
c. high external validity.

128. Which of the following is an internal validity question in experimental research?

a. Has maturation influenced the dependent variable?
b. Was the sample representative of the population?
c. Has the hypothesis been stated in operational form?
d. How widely can the results of the experiment be generalized?
e. Are the potential results of the study worth the cost?

129. Which term least belongs with the others?

a. internal validity
b. external validity
c. generalizability
d. representativeness

130. "To what populations, settings, treatment variables, and measurement variables can this effect be generalized?" might most appropriately be asked in relation to the concept of

a. criterion validity.
b. internal validity.
c. external validity.
d. construct validity.

131. "Did in fact the experimental treatments make a difference in this specific experimental instance?"might most appropriately be asked in relation to the concept of

a. criterion validity.
b. internal validity.
c. external validity.
d. construct validity.

132. In evaluating a research project, what are the two most important criteria?

a. internal validity and external validity.
b. representativeness and generalizability.
c. practical significance and statistical significance.
d. internal consistency and reproducibility.

133. A pre-test of achievement is given to an unselected group of 40 students five minutes prior to an hour's instruction in addition. The post-test that immediately followed the instruction showed a 10 point gain from the pre-test. It is concluded that the instruction was effective in producing a gain. Which one of the following sources of invalidity could also explain the pre-test to post-test gain?

a. statistical regression
b. interaction of selection and maturation
c. instrumentation
d. testing

134. Professor "X" graded initial essay exams for his class, then graded the final essays to see if improvement had occurred. Which of these <u>least</u> jeopardizes internal validity?

a. history
b. maturation
c. testing
d. instrumentation
e. regression

135. Which would probably be the most serious threat to internal validity?

a. history
b. maturation
c. testing
d. instrumentation
e. regression

136. A threat to internal validity that may occur from processes within respondents operating as a function of the passage of time per se (and not specific to particular events) is known as

a. maturation
b. instrumentation
c. regression
d. reactivity

137. When groups selected for their extreme scores on a pre-test are used in an experiment, a likely source of invalidity in some designs is

a. selection
b. maturation
c. regression
d. interaction of selection and treatment

138. In experimental design, when comparisons are made of groups which have been selected on the basis of their extreme scores, the post-test means of the groups tend to move toward the means of the entire population from which the extreme groups were selected. This factor which jeopardizes validity of the findings is termed

a. differential selection
b. interaction of selection and X.
c. experimental mortality
d. statistical regression

139. Which of the following is a factor jeopardizing the external validity of an experiment?

a. statistical regression
b. interaction of selection biases and the experimental variable
c. instrumentation
d. history

140. Children having attended nursery school were compared with those having no such experience on a readiness test at the beginning of Kindergarten and were found to be superior. The research attributed this superiority to the children's nursery-school experience. The greatest threat to internal validity is

a. history
b. maturation
c. testing
d. selection
e. experimental mortality

141. Pupils in the remedial reading program increased in problem solving ability during the course of the year. Attributing the cause to the change of the program overlooks several alternative factors, the most significant of which is probably

a. selection
b. testing
c. experimental mortality
d. regression

142. Students with low, average and high initial self-esteem were counseled. The low group gained most over 2 months. Assuming the counseling was more effective with the low group fails to consider (greatest threat)

a. history
b. maturation
c. testing
d. instrumentation
e. regression

IV. Methods of Data Collection

143. Annual achievement tests which are parts of the school testing program, illness records, daily assignments and other routine characteristics and activities of the school are considered to be

   a. reactive measures
   b. nonreactive measures

144. Which of the following is most likely to provide the best description of the objectives of instruction in a school system?

   a. teacher ratings of the students
   b. standardized aptitude tests
   c. teacher-made achievement tests
   d. standardized achievement tests

145. In which way are teacher-made tests superior to standardized tests?

   a. They are more reliable for evaluating differences among very poor and very good students.
   b. They provide more valid measures of the teachers' specific objectives.
   c. They provide a better measure of the student's grasp of important facts and principles.
   d. They are simpler to administer and score.

146. Which of the following is most characteristic of <u>skilled</u> as opposed to unskilled observers in research?

   a. making generalized descriptions or evaluations rather than noting specific incidents
   b. interpreting behavior on the basis of limited data rather than waiting for confirmation by subsequent incidents
   c. giving the child's behavior rather than the personal reaction of the observer
   d. recording primarily dramatic or negative incidents

147. Which of the following is essential to <u>skilled</u> observation as a research technique in studying a pupil's behavior?

   a. recording primarily dramatic behavior
   b. recording primarily the "whys" of the behavior observed
   c. recording primarily the "whats" of the behavior
   d. using data obtained as bases for generalizations concerning the behaviors of other pupils

'8. According to Kerlinger, sampling of behavior by the observation method can be considered as consisting of two aspects:

a. person sampling and event sampling
b. pe·son sampling and time sampling
c. event sampling and time sampling
d. criterion sampling and person sampling

149. Is it important to follow up those persons in a survey-sample who have failed to return questionnaires mailed to them? (Assume that the direct-mail method is appropriate.)

a. No, because a certain loss must be expected.
b. No, because such delayed returns would be of doubtful value.
c. Yes, because the sample at hand may be biased.
d. Yes, because the size of sample should be as large as possible.

'50. Interviews and questionnaires as a data collection method

a. are more effective than observational techniques.
b. reveal only information the subject is willing to report.
c. cannot be considered to have validity.
d. provide no information about past behavior.

51. Direct-mail questionnaires have which of these factors most seriously reducing the validity of their "findings"?

a. history
b. regression
c. selection
d. instrumentation
e. reactive effects

.... Which of the following is usually the most serious limitation in the use of the mailed questionnaire in descriptive research?

a. defining a population
b. selecting a sample
c. obtaining responses
d. analyzing the data

153. Which one is <u>not</u> a characteristic of rating scales?

a. difficult to construct
b. subject to bias
c. easy to administer
d. measures remembered behavior

1970 SUMMER RESEARCH TRAINING INSTITUTE

PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS

Abstracts of Proposed Research/Evaluative Activity

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposal Research/Evaluative Activity
ANDRE, RICHARD E. 950 No. Pleasant Street Amherst, Massachusetts 02002	Responsibility: The Evolution of Creative Synthesis (A personal position paper)	This paper conveys a set of beliefs, values, processes and concepts that represent a way to approach life. Because of my belief in the universality of these, I have tried to present the subject without attaching myself to it. However, it is important that the reader know that the entire premise of my independent investigation, resulting in this paper, has been totally based upon my belief, knowledge and understanding of the teaching of the Baha'i Faith As such, much of what is presented represents my goals for developing my own human potential. The above elements constitute deeply held values for me at present and, as such, are up for discussion but not for negotiation.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
BROOKS, MARSHALL Div. of Development Department of Public Instruction Raleigh, North Carolina	A Comparative Study of the Relationship of Locus of Control and the Organization of the Elementary School and Science Achievement	More schools annually are implementing a nongraded plan. Researchers have attempted to compare the effects of graded and nongraded school organizations on the achievements of students only to end up with inconclusive results. The purpose of the study is to investigate the reliability of one variable (i.e. Internal-External locus of control). null hypotheses (see page 5 of proposal) To determine all nongraded elementary schools which meet the criteria set forth in the study. (Appendix B) To match each nongraded school with a graded school which closely approximate each other in socio-economic/ background. To administer the children's locus of evaluation-control scale (CLOE-C) To determine each school's performance by ranking the scores from high to low with the high scores representing internal locus of control and the low scores representing external locus of control. To administer the SAT to those students from each school scoring in the uppoer and lower quadrants To conduct appropriate statistical procedures and analysis of data To determine from the collected data conclusions and alternative recommendations.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposal Research/Evaluative Activity
BURKE, JAMES M. Measurement and Evaluation State Department of Education Box 2219 Hartford, Conn. 06115	Operationalizing Instructional Outcomes for Handicapped Children	Improvement of Special Education personnel and others in identifying, criticizing, operationalizing, and evaluating institutional outcomes. Institute activities will consist of a combination of lectures, use of projectuals and other AV materials, discussions and work-shop sessions. Emphasis would be on work periods in which the participants would be constructing objectives or measurement procedures and/or criticizing the objectives or procedures. The general model of the teaching learning process determining objectives, selecting learning experiences, organizing learning experiences. Evaluating behavioral objectives and the instructional process - systematizing instructional decision-making Analyzing objectives - establishing criteria for behaviorally stated goals. Writing objectives Applying objectives - relating objectives to teaching, learning, evaluation

USOE Title IV HEW Research Ins..tute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
FINCH, JOHN PAERIS Program Admin. of Ed Research and Info. Systems College of Education University of Iowa Iowa City, Iowa	A System Evaluation Design for the Ten Hour Day	To explore the feasibility of implementing a ten hour day schedule as an alternative solution to the problem of overcrowding. To develop an instrument to survey public attitudes towards double sessions To conduct a review of the literature and a study of the use of the ten hour day in Dade County (Miami) to determine the objectives to a solution for overcrowding To evaluate the ways and degree to which the ten hour day succeed in meeting these objectives. To determine the costs of a double session program by utilizing the Dade County model To construct a PERT network to designate the time for putting the ten hour plan into effect To design and construct a flow chart which will show the problems and alternatives to be considered To have the Evaluation Department develop an instrument to investigate the effects of the ten hour day on student achievement and student, teacher and parent attitude.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposal Research/Evaluative Activity
JOHNSON, MABEL P.O. Box 253 Mound Bayou, Mississippi TURNER, LUCIOUS 212 Sumner Hill Drive Clinton, Mississippi	Individualized Basal Reader Program	The program will be administered to 800 students from grades 1-12. 75% of these students have already been identified by use of the Metropolitan Achievement Test as reading below grade level. It will consist of: . A design to emphasize the teaching of reading skills in the areas of (a)visual-oral perception (b) literal comprehension, (c) interpretive and appreciative skills, (d) reading study skills and (e) rate of comprehension. . The program will attempt to incubate the interest centered and readability aspect of the individualized program and the sequential skills aspect of the basal reader program. . The use of "floating teachers" to maximize the use of trained staff and minimize the pupil-teacher ratio. . An inservice training program conducted by an outside reading consultant and a course in reading methods and materials. . To evaluate the advantages and disadvantages of the two methods individually and as a combined approach to the reading problem.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
HOLOWENZAK, STEPHEN 4210 Russel Avenue Mt. Rainier, Maryland	A Proposal for a Survey of Social Security Student Beneficiaries Title IV	To provide a federal financial aid model that would most fairly allocate available resources to qualified students from low-income families To develop a "Student Financial Aid Package Model" to include: (1) better concentration on the neediest students (2) assure funds for every qualified student (3) provide advance knowledge of aid (4) equity of aid received by similar students To design a "Student Financial Aid Package Model" that would include not only the four large federal sponsored programs but also Veterans Benefits and Social Security Benefits. To identify major objectives and designation of critical statistics to be obtained, for what areas and sub-areas. To provide decision-makers with valuable information necessary for improving policy development in Higher Education.

OE Title IV HEW Research Institute 1970-71

PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
KILBERT, CHARLES 4307 Hollygrove Street New Orleans, La.	A Proposal for a Motivational Program to Up-Grade Enrollment and Continuous Participation of Functional Illiterates in Adult Education Courses	To conduct an evaluation of a multi-method motivational program to enroll functional, illiterates in literacy training classes and ways to encourage their participation in the classes until graduation. To develop techniques to encourage "functional" and "non-functional" illiterates to enroll in basic adult education. To develop models to help them realize the socio-economic advantages to be gained through adult education. To develop teams of community door to door workers to visit, interview and encourage participants. To incorporate consultants in basic adult education to determine alternatives available to the program. To design and implement a three day training workshop for research interviewers.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
KING. GERALD 1316A Brackenridge Apt. Austin, Texas 78703	A Proposal for the Implementation of a District Evaluation Training Program	To implement a six-week summer program to train Dallas Independent School District educators in CIPP evaluation techniques in order to teach the DISD professional staff the skills and techniques of CIPP evaluation. To determine participants from a group of vertical schools on the basis of potential impact and ability to pilot a five-year comprehensive evaluation project. To arrange for a consortium between DISD and Ohio State University to help train Ph.D. and MEd. qualified personnel on an intern basis. To construct a model which will allow untrained personnel to rotate into the pilot schools at the beginning of each year

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
LEHMAN, ROBERT 805 North Main Street Helena, Mont. MYERS, DONALD Nova University Ft. Lauderdale, Fla.	To Evaluate the Relationship Between the Alienation of Students from School and Student-School Achievement	Hypothesis: There will be no significant difference in grade point index between groups of students who are alienated and those who are not alienated as determined by a median split of the sample on the meaninglessness scale. To determine acceptable definitions for meaninglessness. To select a scale (Gutlman scale) which will fulfill the definition of meaninglessness. To randomly select subjects from the total eighth grade student body in the Centerville, Ohio school system After ranking on the meaningless scale, the group will be split at the median, and by analysis of variance the grade point indices of the groups will be tested for difference. To disseminate through a four chapter report the conclusions of this study. Chapter I - introduction to problem Chapter II- (a) history & definition of alienation (b) research relating alienation and learning Chapter III- data collection method, and analysis of data Chapter IV- conclusions & summarization as well as suggestions on further research.

USOE Title IV HEW Research Institute 1970-71

PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposal Research/Evaluative Activity
LOGAN, SIMUEL MORRIS P.O. Box 166 Thomson, Georgia 30824	Proposal for Funding A Nursing Center for Aged Persons	To give assistance to aged persons living in many instances without relatives and needing nursing home care for physical disabilities.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
MORRISON, MAX Director, Planning, Research, and Evaluation Department of Public Instruction Grimes State Office Bldg. DesMoines, Iowa	A Survey of the "Educational Bulletin" and a Selected Number of other Curriculum Handbooks	To formally evaluate the number and type of local school personnel using the state "Educational Bulletin" and state curriculum handbooks over the last forty years. To evaluate the appropriateness of the content of such handbooks to the reader To develop an instrument for surveying a representative sample To develop a model which can be utilized each year by the Iowa Department of Instruction to focus on at least one publication and one Department sponsored activity To analyze, synthesize and make constructive recommendations on the survey questionnaire responses for the Iowa Department of Instruction.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
BERMAN, LAURENCE Testing Service Western Michigan Univ. Kalamazoo, Mich.	A Proposed Course in Testing and Evaluation Methods	To give students a basic understanding of measurement and evaluation so that they will be able to relate the concepts acquired from this course in an intelligent fashion to their daily work. To have students become familiar with common measurement and evaluation techniques. To give students practice in and instructional feedback concerning the construction of classroom and/or specialized instruments. To give students a rudimentary knowledge of some basic statistical concepts and the employment of these concepts within the classroom. Competencies to be Developed: Understanding the purposes for which measurement and evaluation devices are useful; Strengths and weaknesses of these devices Skills and tools needed to employ and intepret these devices Implications of the devices for the total educational program.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
MOSLEY, FREDERICK 201 Faulkner Lane Waco, Texas	Title III, ESEA A Multi-Dimension Developmental Reading Program	To develop innovative activities, materials and procedure for the individual child in grade levels from kindegarten through three. To train teacher aides to assist with non-instructiona duties of teachers. The development of the complete and comprehensive individual evaluation of the student. The establishment of an instructional media center within each building to develop a system for the individual evaluation of children with learning disabilities. To expand guidance services to the elementary schoo s. To develop a citizen advisory committee to make recommendations to MDDRP project staff as well as dissemination of the project to the community. To provide in-service training in media utilization

USOE Title IV HEW Research Institute 1970-71

PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
Title V Sec. 503		
MOSES, AUGUSTINE Capital Hill P.O. Box 156 Saipan, Mariana Islands	A Proposal to Strengthen the Trust Territory of the Pacific Islands State Department of Education	State Department Educational Needs: (a) to develop culture free standardized measurement instruments for use in teacher training, scholarship and occupational training programs. (b) to develop standardized curriculum materials for the Trust Territory (c) To provide opportunities for staff development through participation in national and regional conferences and workshops

USOE Title IV HEW Research Institute 1970-71

PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
WILLIAMSON JR., CHARLES 4432 Exemouth Road S.E. Knoxville, Tennessee OWENS, SHARYNN 310 Ben Hur Avenue S.E. Knoxville, Tennessee	Understanding In Retrospect: Past and Present	To develop a two week two phase orientation program for inter-racial institutes. To demonstrate the need for understanding the black-white problem in America through the use of "controlled sensitivity sessions" To train participant observers, institute counselors, instructional staff and related personnel in inter-racial group behavior To develop a greater level of group coherence and attempt to dissolve the imaginary and real lines of division To provide participants with activities that will promote a high degree of group interaction and personal self actualization in regards to common political-socio-economic influences To develop a program for both blacks and whites that will deal with the historical and contemporary aspects of black America.

USOE Title IV HEW Research Institute 1970-71

PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
PITERS, RONALD E. Montana State Department of Public Instruction State Capitol Helena, Montana 59601	A Technical Assistance Project to Develop a State Plan for the Preparation of State Vocational-Technical Education Personnel Proposed under EPDA (Title V)	To develop and produce a State Plan for vocational-technical education programs: 1.1 identify training needs and set priorities in terms of urgency of completion; 1.2 develop a system for accepting, reviewing and appraising proposed EPDA programs on the basis of 1.1 1.21 develop a system for follow-up, reporting, dissemination and evaluation; 1.3 develop a management system for 1.2; 1.31 develop a system for establishing priorities for funding LEA programs; 1.4 develop an inventory of possible individuals, institutions, other agencies, etc. which may be utilized in a cooperative and consultive basis by those submitting EPDA program proposals.

USOE Title IV HEW Research In..itute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
RICCI, ROBERT Title III Coordinator State Agency for Elementary and Secondary Education Roger Williams Bldg. Hayes St. Providence, R. I.	Title III ESEA The Identification of the Student's Stronger Modalities of Learning; the Development of Individualized Curriculum Materials Constructed for those Stronger Modalities; and the Application of those Materials to Specific Concepts to be Learned: Project CAM (Concepts & Materials)	To significantly increase the general and specific reading levels of those first grade children given the specialized treatment. To increase the student's attitudes toward learning To diagnostically evaluate pupils to obtain base line data on each pupil's abilities. To develop multi-sensory materials and activities through a coordinated team of specialists. To develop a curriculum to emphasis a child's strengths instead of weaknesses To develop materials for specific concepts to be learned and classified according to modalities for learning. To design an evaluation model, using CIPP, to delineat, obtain and provide information to education decision makers in the project.

USOE Title IV HEW Research Institute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
LOUIS SIMONINI Director: Office of Civil Rights in Education Agency for Elementary and Secondary Education Roger Williams Building Hayes Street Providence, R.I. 02908	Title IV Sec. 403 A Proposal to Continue a Civil Rights in Education Office in Rhode Island Agency for Elementary and Secondary Education	To effect school desegregation throughout the state by continuing a Civil Rights in Education office. To make available advisory assistance on school desegregation to local systems. Continuing a review of legislation, policies, and programs supportive to school desegregation and the formulation of state agencies strategies. To advise the Director of Elementary and Secondary Education and the staff to the State Agency on all matters pertaining to school desegregation. To sensitize the State Agency staff to the educational importance of school desegregation and how it relates to specific areas of responsibility. To maintain close ties with the Office of Education and HEW Title IV and VI offices. To work with the city of Providence in finishing the job of desegregation by developing a plan to encompass the high schools. To review and re-align the desegregation plan in the city of Newport. To begin working on desegregation with the cities o East Providence and Woonsocket and the town of South Kingston.
	To work with the Lincoln-Filene Center at Tufts University to develop techniques for making teachers aware of the problems faced by racial and ethnic minority groups.	To work with local education agencies in integratin the foreign language speaking students into the regular school setting.

USOE Title IV HEW Research Institute 1970-71

PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
SUMIDA, JANET Office of Instructional Services Evaluation Section Ohio State University Columbus, Ohio	A Guide For the Development of Interpersonal Communication Techniques and Group Problem-Solving Skills for Team Teaching.	To develop a theoretical and practical guide that will facilitate the education and training of teachers for team teaching in their development of interpersonal communication techniques and group problem-solving skills. To determine what interpersonal needs of teachers are identifiable and how these are affected by team teaching. To determine what team work techniques and group interaction procedures are currently being attempted in education. To integrate research or team teaching personnel problems and related team work focusing on interpersonal communication techniques and group problem-solving skills. To develop the integrated research materials into a guide format for use in the training of teachers for team teaching. To make provisions for the use of the guide that is to be developed. To determine communication techniques and interaction procedures proven effective for fields other than education are particularly appropriate for team teaching practices. To analysis and synthesis research activities.

USOE Title IV HEW Research titute 1970-71
PARTICIPANT RESEARCH/EVALUATIVE PROPOSALS -- STATUS REPORT (11/1/70)

1970 Institute Participant Name and Mailing Address	Title of Research/ Evaluative Proposal and Activity Status	Mini-Abstract of Proposed Research/Evaluative Activity
PAYNE, HATTIE P.O. Box 705 Grambling, La.	A Proposal to Develop a Material, Management, Methods Classroom Center	To equip the special class of mentally retarded children of Grambling, La. with the materials and supplies needed to set up a material classroom management, method center for teaching academic topics, psycho-motor skills, social functioning and emotional well being to educable retarded children. To provide mentally retarded students with a series of experiences involving living and non-living objects.

APPENDIX B

PROCESS EVALUATION

BUREAU OF EDUCATIONAL RESEARCH AND TESTING SERVICES
P. O. BOX Q
DURHAM, NEW HAMPSHIRE 03824

UNIVERSITY OF NEW HAMPSHIRE
Department of Education

Telephone: 862-1826
862-1827
862-1046

December 13, 1971

Dr. John C. Egermeier
Acting Chief
Research Training Branch
National Center for Educational
Research and Development
Department of Health, Education
and Welfare
Office of Education
Washington, D.C. 20202

Dear John:

We have finally received permission from all the consultants to publish the Final Report on the New Hampshire Summer Research Training Institutes.

You will notice that I have enclosed a copy of the Table of Contents of the Supplementary Appendix and identified the items which should not be included in ERIC. Additionally, CIRCE has requested that their Final Report on the 1970 Institute be submitted to ERIC in total. Accordingly, the CIRCE final Evaluation Report should be included in the section titled Process Evaluation. I have enclosed a copy of their Report.

Should you have any further questions, please feel free to call me.

Warm regards,

Mve

Maurice Olivier
Assistant Director

MO:cp

Enclosures

EVALUATION REPORT

UNIVERSITY OF NEW HAMPSHIRE SUMMER INSTITUTE: PLANNING FOR EDUCATIONAL DECISION MAKING IN THE 70s

July 6 - August 14, 1970

James L. Wardrop
Terry Denny

Center for Instructional Research and Curriculum Evaluation
University of Illinois at Urbana-Champaign

October 1970

Time it was,
And what a time it was,
It was...
A time of innocence,
A time of confidences.
Long ago...it must be....
I have a photograph.
Preserve your memories;
They're all that's left you.

--Paul Simon, "Bookends Theme"

EVALUATION REPORT

UNIVERSITY OF NEW HAMPSHIRE SUMMER INSTITUTE:
PLANNING FOR EDUCATIONAL DECISION MAKING IN THE 70s

July 6 - August 14, 1970

It all began with the submission of a proposal by Gilbert Austin of the University of New Hampshire to the U. S. Office of Education for a summer institute whose topic was to be "Planning for Educational Decision Making in the 70s." At Austin's request, members of the Center for Instructional Research and Curriculum Evaluation at the University of Illinois agreed to undertake an "external evaluation" of the Institute. This is a report of that evaluation.

As frequently happens, notification of funding for the Institute was late in coming. Thus, the time available for recruitment of participants was short. Additionally, by the time the Institute was funded, Austin was no longer at the University of New Hampshire. Albert Elwell stepped in as Institute Director. This change in directors after the structure of the Institute had been established probably (the temptation is to say "undoubtedly") accounts for many of the difficulties encountered later. Elwell, Everett Barnes (administrative assistant), and Maurice Olivier (coordinator of program planning) were now faced with the following problem: to recruit, according to criteria they had not selected, thirty qualified participants for an Institute they had not designed, within a period of about six weeks from the time funding was awarded until the Institute was to begin.

The remainder of this report represents an attempt (1) to document the goods and bads, the rights and wrongs of the New Hampshire Institute and (2) to abstract from these findings some general impressions about the place of institutes in today's world of professional education and the process of evaluation of such institutes. The report is organized in terms of four aspects of the Institute: staff, consultants, content, and participants. It is an attempt to characterize

each of these aspects from the point of view of the participants in, consultants to, and evaluators of the Institute.

EXTERNAL EVALUATION

Different people at different times have seen CIRCE's external evaluation task within the UNHI differently. The project developer, Gil Austin, originally intended that CIRCE would produce a hard-nosed report of the work of the Institute to complement the internal hard-nosed evaluation to be conducted by the staff. CIRCE originally intended it as an opportunity to integrate several monitoring and data-collection techniques (unobtrusive measures, participant observers, impressionistic judgments) thought to be useful in broadening the view held by Austin.

Such views proved to be in contrast to that presented during the summer by a USOE official. He described CIRCE's work as the sine qua non for funding the Institute. As he saw it, it was CIRCE's role to evaluate the utility of product packages ("exportables") yielded by the Institute for a second generation of institutes to be conducted in the summer of 1971.

Subsequent project director Al Elwell valued CIRCE principally for its ability to provide him with aperiodic evaluative counsel and (process) information during the summer--as well as for providing him with a summative evaluation report. In retrospect it appears that all these roles were played by CIRCE: one well, another badly--none in a manner to warrant rave reviews.

In carrying out these evaluative functions, we employed several information-gathering techniques. For the process evaluation, we relied on two major sources of information: several one-to-three-day site visits by the evaluators to the Institute, during which we observed, listened, and probed; and a Weekly Participant Opinionnaire, by means of which we obtained systematic feedback

from the participants about their reactions to each week's activities. (A copy of this Opinionnaire and all other instruments used in our evaluation will be found in the Appendix to this report.) An early expectation was that the participant observers would provide the evaluators with a third kind of information through a series of regular reports. This expectation proved wrong.

For a summative evaluation, we made use of some of the "process" information obtained during the course of the Institute but incorporated other data gathered by means of (1) an Orientation to Evaluation scale given at the beginning and again at the end of the Institute, (2) "self-interviews" from the instructional staff (consultants), and (3) a Summary Opinionnaire. Copies of these instruments are included in the Appendix. (On the Summary Opinionnaire, frequencies of responses to the various alternatives have been provided.)

ADMINISTRATIVE STAFF

In any educational endeavor, some things are done right, some wrong. The former tend to get overlooked, the latter overemphasized. Although we have tried in this report not to overlook the things that were done right and not to overemphasize the things that were done wrong, it is unlikely that we have been completely successful.

The Institute staff--Elwell, Barnes, Olivier, and others from the University of New Hampshire--did an excellent job of recruiting top-quality participants in a very short time. The "General Information Handbook," designed by Elaine Gardner, Institute secretary and technical staff assistant and issued to all participants and consultants, was also a very thoughtful and useful document insofar as it provided general information to the participants and instructional consultants about the Institute and the local area.

Throughout the Institute these administrative staff members showed themselves to be energetic, patient, and attentive to and concerned about the needs and desires of the Institute participants. In support of this statement, we have participant opinions on the weekly opinionnaire to the effect that the staff was available to talk to whenever necessary, particularly from the third week on. (During weeks one and two of the Institute four participants were less than satisfied with staff availability but from that time on everyone agreed that the staff was indeed readily available.) Similarly, participants said the staff was paying enough attention to the important problems that arose although a couple of participants were never satisfied in this respect. Participants also felt that the staff had taken appropriate actions to resolve problems as they arose. Finally, on the Summary Opinionnaire, 21 participants rated the staff as "Good" or "Excellent" while three rated them as "Poor" or "Bad." Briefly, then, it seems that the Institute staff did an excellent job of making themselves available to listen to--and at least gave the appearance of acting to correct--the problems of the participants as they arose during the course of the Institute.

An important component of the duties of the staff of a summer institute, however, is to facilitate the smooth flow of the instructional component of that institute. THIS IS PARTICULARLY IMPORTANT IN AN INSTITUTE ORGANIZED LIKE THE ONE IN NEW HAMPSHIRE WHERE PARTICIPANTS--IN A TOTAL OF SIX WEEKS--ARE EXPOSED TO SEVERAL HIGH-POWERED "EXPERTS," EACH OF WHOM HAS A UNIQUE TOPIC TO PRESENT AND A UNIQUE METHOD FOR PRESENTING THAT CONTENT. If the presentations of guest consultants are to be "relevant" to the theme of the institute and to the needs of the participants, if the transition from consultant to consultant (topic to topic) is to be accomplished smoothly, and if time-consuming and threatening confrontations of participants and consultants are to be minimized, it is imperative

that the permanent administrative staff of the institute take strong positive action. What kinds of actions might serve to facilitate the flow and transition of instruction? First, it would seem necessary that participants be given some advance information about each consultant. This might include an overview of the content of his presentation (perhaps consultants--as a part of their responsibilities to the institute--should prepare such overviews themselves) several days before the consultant is scheduled to "perform." In addition, it might help the participants if they were to receive a brief vita of each consultant. Activities like these last two would give the participants some idea about what the consultants were going to present, thereby alleviating some of the anxieties. (That such anxieties among participants did in fact exist in the New Hampshire Institute is reflected in reports from the participant observers during the early parts of the Institute and in some of the comments made to the evaluators during site visits.)

Equally as important as preparing the institute participants for the consultants is the task of preparing the consultants for the participants. That is, consultants should be provided--in advance--with information about the institute participants: their backgrounds, job descriptions, purposes in attending the institute, and any information available about what to expect by way of group dynamics during the institute. (This latter item will be most useful to the second and subsequent consultants.)

If the kinds of information described in the previous two paragraphs had been available during the New Hampshire Institute, it is likely that many of the consultant-participant conflicts described below could have been avoided. It is on this issue that the administrative staff of the New Hampshire Institute should be taken to task. True, the Institute staff was handicapped by a lack

of time between date of funding and the start of the Institute. True, the Institute director stepped in at the last minute to replace the person who had planned the Institute, with a very different philosophy and a very different administrative style. Nevertheless, the important task of preparing participants for the consultants and consultants for the participants could have been better handled. The lateness of funding undoubtedly was a factor here.

In spite of the above comments, this report would not be complete or fair without mention of one outstanding counter-example. After two and one-half weeks of the Institute, it was apparent that consultants could not come in and "do their thing" for their alloted time without careful consideration of the needs and desires of the participants. The first two consultants, Cook and Walbesser, had arrived with just that intention, with almost-disastrous results. On the basis of the experiences of Cook and Walbesser, the Institute director made a personal visit to the next consultant, Daniel Stufflebeam, several days in advance of his scheduled participation in order to describe to him the kinds of difficulties the first two consultants had experienced. On the basis of that advance warning, Stufflebeam made some drastic changes in his method of operation, changes which possibly "saved" the Institute.

The staff was also remiss with respect to several other administrative details. For example, it was a common experience of both consultants and evaluators to arrive on Sunday night with little or no information about what to expect Monday morning. As an extreme example, Stufflebeam arrived at the New England Center for Continuing Education at 10:30 on Sunday evening in the belief that he was to reside there for the next two weeks only to find that in fact he did not have a reservation there. A telephone call to the Institute director at that time elicited the information that he would be staying elsewhere. At the

time of his arrival, Stufflebeam also did not know where he was to be on Monday or at what time. It should not be necessary for a consultant to call the Institute director at that late moment to find out such basic information.

Institute participants were themselves somewhat aware of this weakness in the administration of the Institute. When asked if they thought the Institute was well-organized, participants responded generally favorably but noticeably less so than to other questions about the staff discussed above.

STAFF: PARTICIPANT OBSERVERS

Two participant observers, one black and one white, were recruited for the New Hampshire Institute. Their primary allegiance was to the Institute director although it was anticipated that their observations would also be of considerable use to the evaluators. That they fulfilled their primary role--that of monitoring and reporting to the Institute director the feelings of the participants about the Institute--can be attested to by the administrative staff. That they were of less use than anticipated in their secondary role--that of providing useful information to the evaluation team during the Institute--can be attested to by the evaluators. This lack of utility to the evaluators of the participant observers raises some important questions about how evaluators can obtain the most benefit--or any benefit--from the presence of such observers. These questions will be considered later in this report.

An important factor to consider in the use of participant observers is the careful specification of their role in an institute. Are they to be primarily participants? Or primarily observers? It is likely that this question will answer itself, given the context in which the participant observer is functioning and his personality. It is also important to consider the unwanted side effects of the presence of participant observers. In the New Hampshire Institute

there was some early resentment on the part of some participants to the presence of the observers, especially in the residential setting. As one participant remarked, "It gets annoying to have someone looking over your shoulder while you're eating dinner, noting who you are talking to and what you are saying." Yet, from the point of view of the Institute staff, the information gleaned by a participant observer in that setting was and is an invaluable asset to on-going operations and administrative decision making. Related to this last point, on the Summary Opinionnaire fifteen participants rated the participant observers as good, eight were uncertain, and the other five gave decidedly negative responses. In the context of generally positive reactions to the Institute, these responses represent what might be significant dissatisfaction. Unfortunately, perhaps, it is impossible to differentiate between the two observers to determine whether either or both represented a source of dissatisfaction.

CONSULTANTS

The prospectus for the New Hampshire Institute indicated five major instructional components: Week One--Desmond Cook on project management models and techniques; Weeks Two and Three--Henry Walbesser and staff on behavioral objectives, design of assessment tasks, and construction of learning hierarchies; Weeks Four and Five--Daniel Stufflebeam, Egon Guba, and Robert Hammond on evaluation models and techniques, seminars on problematic simulations; and Week Six--William Asher and Daniel Heisey on problems associated with developing, disseminating, and adopting educational innovations. This lineup was described in the planning group meeting prior to the Institute (May 24) as a "parade of stars." This particular model for a summer Institute created some unique problems. The present section of this report is intended to document some of those problems and offer some suggestions for avoiding them in other Institutes.

(In preparing this section of the report, it was virtually impossible to separate the various components of the Institute: consultants, the content of their presentations, the sequence in which they appeared, the nature of the participant group, the actions--or inactions--of the administrative staff. As a consequence, although the section is headed "Consultants," its scope is much broader.)

It is the impression of the evaluators that many of the problems arising from consultant-participant or consultant-staff encounters in the New Hampshire Institute resulted from the fact that the two group combinations held very different sets of expectations as to what the Institute was all about. The consultants, who had had much experience with (traditional) summer institutes, came with the expectation that they were going to spend one or two weeks "doing their thing." That is, both Cook (Week One) and Walbesser (Weeks Two and Three) anticipated coming in, presenting their materials in their own ways, and leaving. The participants, many of whom had not been initiated into the fraternity of summer-institute attenders, came looking for material which would be directly relevant to them as they performed in their professional roles "back home." Because the participants, as a group, were extremely heterogeneous with respect to what was "relevant to them," their individual expectations were impossible of fulfillment in the context of the Institute. Because the first two consultants were not initially aware of (1) the diverse nature of the group and (2) the expectations of the participants, they had no chance even to attempt to meet those expectations.

On the morning of the third day of the first week of the Institute, Desmond Cook was directly challenged by one of the participants. He was asked to justify his presentation of the material he was dealing with, to indicate its importance and relevance to the participants. This open challenge came to

be a pattern for the remainder of the Institute. In retrospect, it was readily predictable that each consultant would find it necessary, early in his presentation, to meet and deal with a direct challenge. This confrontation occurred with each of the consultants, without exception, although it took a more violent form for those who had made no apparent attempt to listen to or consider plausible adaptive strategies based on the characteristics of the participants than for those who were obviously making a real effort to accommodate the needs and desires of the participants.

Of particular interest is the various strategies the consultants used in their attempts to deal with these confrontations. Cook had been warned in advance to expect a confrontation (a "plus" for the monitoring function in this Institute). On the basis of his perceptions of the participants' feelings, he altered his instructional strategy. In his own words:

> "Instructional approach was modified so that more informality and participation were generated. I put less emphasis on covering material and dealt with the idea of trying to accomplish only two or three major points.... I think this helped to ease tensions during the last couple of days."

(Why did the confrontation occur in the first place? As Cook saw it, there were two factors involved:

> "First, a tendency on my part to go with past success in view of <u>not knowing the full composition of the group</u>. Second, the heterogeniety of the group in both background experiences and educational level." (Underscoring added)

Again, it seems that the Institute staff could have taken steps to minimize these problems.)

Desmond Cook had "done his thing" with program management. In came Henry Walbesser with a different instructional style to present behavioral objectives and learning hierarchies. One would hope that the Institute staff could have profited from Cook's experiences and would have effectively sensitized

Walbesser for the group he was about to encounter. Unfortunately, this did not occur. Why it did not occur we cannot say. It may be that Walbesser was unresponsive to input from the Institute staff; it may be that the Institute staff failed to act strongly enough; it may be....

Institute participants resented Walbesser's coming in and presenting a poorly edited programmed instruction text, a preplanned program of instruction which included major components of large-group lecture and what the participants saw as "busywork" exercises. (Several participants noted, "Had I (they) wanted to study Walbesser's text, I (they) would have mailed $2.25 plus postage and read it in the leisure of home/office." The feeling was that H. W. and his team did not supplement the text with their presence!) Once again, the differing expectations of consultant and participants seemed to underlie the conflict. Walbesser was less adaptive than Cook. (If the leadership personnel in the Institute had done an effective job of coordination and preparation, he might not have found it necessary to modify his approach once he was under way.) Participants reported that Walbesser tried at least four different "cop-outs" in responding to challenge:

1. Threatening participants (something like "Complete the tasks I assigned or I'll write your boss, your Congressman, H.E.W.");

2. Asking the Institute staff to send two participants home and cut off their stipends;

3. Declaring that there was a "racial problem" among Institute participants (NOTE: staff and participant observers could find no evidence of such a problem);

4. "Apparently" changing his style for his second week (by having lectures only on Monday and Friday mornings and "free-wheeling seminars" the rest of the time. The seminars were "the same old Henry with smaller groups").

Given that it is impossible to control the personality style of consultants, it is imperative that the administrative staff of an Institute such as this one work to insure that confrontations are avoided or consultants are prepared for them.

Enough of anecdotal data for now. How did the participants themselves react to these events? Data relevant to this question can be gleaned from the Weekly Participant Opinionnaires. First, did participants enjoy the instructional staff (consultants) each week?

	Yes	Yes but...	No
Week One (Cook)	16	9	2
Week Two (unmodified Walbesser)	15	2	7
Week Three (modified Walbesser)	19	3	4
Week Four (Stufflebeam)	25	2	-
Week Five (Stufflebeam, Guba, and Hammond	27	-	-
Week Six (Asher, Heisey)	NO DATA COLLECTED		

Clearly from this point of view, Week One was not bad, Week Two not too good, Week Three pretty good, and Weeks Four and Five excellent.

But there are other aspects of these instructional blocks which must be considered. Whether or not a participant enjoyed the consultant(s) for a particular week, did he learn a lot? Observe:

	Yes	Yes but...	No
Week One	17	4	3
Week Two	13	3	6
Week Three	11	5	8
Week Four	20	5	-
Week Five	27	-	-

As anticipated, there is a good bit of consistency in the distribution of responses to these two questions. But notice the data for Weeks Two and Three. Participants "enjoyed" Walbesser more during Week Three, but more of them felt they "learned a lot" during Week Two. This might be considered supporting evidence for the earlier

assertion that Walbesser's change in procedure was more a "cop-out" than a real attempt to accommodate himself to the group.

It was during the third week of the Institute that the director, Elwell, met with Stufflebeam. As a result of that meeting, Stufflebeam made an effort to adapt to the needs and desires of the participants. Among his more successful tactics were (1) requesting that the participants tell him what kinds of problems they were concerned with and would like help on; (2) setting up small-group sessions focusing on common problems; and (3) appointing, after consulting with the Institute staff on the Sunday evening preceding his first instructional day, an "advisory group" of participants to assist in planning the week's activities. One of the evaluators (Wardrop) was present during Stufflebeam's initial encounters with the participants. It was that evaluator's opinion that, once Stufflebeam had taken those three initial actions, he could proceed in whatever manner he chose with the full compliance of the participants. (That the tactics were successful is attested to by the participants' responses on the fourth Weekly Opinionnaire.) Few real consultant-participant difficulties arose during the remainder of the Institute although it should be noted that several participants "copped-out" during the sixth week by avoiding contact with the instructional team. One participant, in fact, left the Institute on Wednesday of that last week.

PARTICIPANTS

A leitmotiv throughout the New Hampshire Institute was the interplay of the diversity of backgrounds, abilities, responsibilities, and concerns of the participants. Such heterogeniety was built into the Institute by the criteria for selection of participants in the original proposal. The Institute was to serve graduate students, LEAs, and personnel in state and federal agencies and was to include specifically ten southern blacks. As a consequence of the selection

process, the Institute wound up with 28 talented (for the most part), concerned (without exception), and aggressive (in comparison with other groups in previous institutes) participants. Such a mix was perhaps the single most important causal factor in the unfolding story of this Institute. It created problems for the consultants from the very beginning:

> [One of the Institute's greatest weaknesses was] the heterogeniety of the group in both background experiences and educational levels. (Consultant A)
>
> [One of the Institute's greatest weaknesses was] the diversity of the purposes for which the participants were attending the Institute.... (Consultant B)
>
> [One of the Institute's greatest weaknesses was] heterogeneous participants. (Consultant C)
>
> [One of the Institute's greatest weaknesses was] too much variance among the participants in both motive for attending and academic ability. (Consultant D)

Based on experiences in this Institute (and elsewhere), we feel impelled to raise some important questions about the nature of the selection process. These questions will be considered in a later section of this report.

INSTRUCTIONAL CONTENT

Just as diversity characterized the participants in the New Hampshire Institute, so the cry for relevance characterized their feelings about the instructional program of the Institute. "Program management," "behavioral objectives," "learning hierarchies," "the CIPP evaluation model," and "comprehensive achievement monitoring" are fashionable among educational researchers and theorists; but some participants in the New Hampshire Institute could not see the possibility of applying these techniques and procedures to the problems with which they were themselves concerned. They did not--many of them, at least--want their time "wasted." Whether this was the feeling of the majority of the participants does not matter for it was the feeling of at least a very vocal group.

This cry for "relevance" created some unique problems because what was relevant for any half-dozen participants was not for the remaining twenty-two. Given the diversity of the participants, satisfying a demand for relevance of the instructional program simply was not possible. The only course of action which had hope of succeeding was individualization of instruction. But total individualization was itself not feasible, given the limited amount of time and energy of any one of the consultants. It was most nearly approached during the fifth week with Stufflebeam, Guba, and Hammond as an effective instructional team. Inadequate knowledge--on the part of both staff and consultants--of the backgrounds and interests of the participants was another limiting factor. The participants and participant observers were themselves aware of this limitation, as evidenced by their suggestions for "pretesting" the participants in order to place them in small groups for certain parts of the instructional program.

Both the cry for relevance and the desire for individualized or small-group instruction had their counterpoints, however. In the former case it is important to keep in mind the viewpoint expressed by one of the participants (addressing Stufflebeam): "I came here to learn...to hear and learn. I might not know what you're talking about, I might not understand you, but whenever you're talking, I'll be sitting there listening." For people like this one, the exposure to the "stars" was important. Relevance, for him, was not a primary criterion. In the latter case (individualized or small-group instruction), an interesting and puzzling phenomenon occurred: When Stufflebeam in Week Four strove valiantly to divide the participants into small groups, with at least a modicum of commonality of interest and concerns within each group, he met with resistance. He found that only if he personally would meet with every small group would many of the participants accept that approach to instruction.

Everyone--or nearly everyone--insisted on being where Stufflebeam was lest they "miss something." Does this phenomenon have some implications for the kinds of selection strategies and criteria which ought to be built into institutes?

Questionnaire responses provide further information about the reactions of participants to the content of the instructional program. Perhaps the most important question in this realm--on a week-to-week basis, at least--asked if the week's content had been challenging and important. The week-by-week responses were as follows:

	Yes	Yes but...	No	Don't know
Week One (Cook)	18	9	-	-
Week Two (Walbesser)	15	6	3	1
Week Three (Walbesser)	14	7	6	2
Week Four (Stufflebeam)	21	5	-	-
Week Five (Stufflebeam, Guba, and Hammond)	24	-	-	1

With the exception of Weeks Two and Three, all participants responding to the questionnaires felt the material presented was both challenging and important. Even during those two exceptional weeks, three-fourths of the participants agreed with this statement. Virtually the same distribution of responses was found for an indirect question about the relevance of the instructional content each week; viz. "Would your professional peers back home be interested in what you learned this week?"

Several questions in the weekly opinionnaire were designed to elicit participant self-evaluations of their learning each week. After all, for participants to benefit from the instructional content of an institute, they must master at least part of that content. The first of these questions--"Did you learn a lot this week?"--yielded the following responses:

	Yes	Yes but...	No	Don't know
Week One	17	4	3	3
Week Two	13	3	6	2
Week Three	11	5	8	2
Week Four	20	5	-	2
Week Five	27	-	-	-

(The pattern is familiar by now.) As a participant, you may feel you have learned a lot but "Do you think you could teach another group what you have learned this week?"

	Yes	Yes but...	No	Don't know
Week One	11	10	2	2
Week Two	14	3	1	5
Week Three	12	7	7	1
Week Four	18	3	3	3
Week Five	9	12	2	2

The participants are telling us something here. Yes, they have indicated, we have learned a lot. No, they continued, we are not as confident that we could teach it to someone else. (Week Five deserves special attention in this regard. The primary instructional activity that week was an elaborate simulation exercise, one which would require much greater understanding of content and a not-insignificant set of materials in order for anyone to attempt to use it with another group. It is not at all surprising that the participants, who were unanimous in indicating that they had learned a lot, were much less confident that they personally could teach what they had learned to others.)

Other questions on the weekly opinionnaires were designed to get at participants' affective reactions to the week's instruction. Paralleling the

earlier question about participants' ability to teach the week's content to another group is the question which asks "Would you want to teach another group what you have learned this week?" By week, the responses to this item were:

	Yes	Yes but...	No	Don't know
Week One	16	5	-	5
Week Two	12	2	6	4
Week Three	12	2	8	4
Week Four	13	9	2	2
Week Five	18	4	2	2

There is a great deal of agreement between responses to this item and responses to the earlier one. There are a couple of notable exceptions, however. Participants were generally uncertain about their ability to teach the materials presented in Weeks One (Cook) and Five (Stufflebeam, Guba, and Hammand's simulation); but in both cases they expressed a desire to do so. In contrast, participants were, as a group, more confident that they could teach the material of Week Four (the Phi Delta Kappa approach to evaluation) than they were interested in doing so.

Another approach to obtaining affective reactions to the material presented was through a question about participants' willingness to recommend that the materials be used in other summer institutes:

	Yes	Yes but...	No	Don't know
Week One	19	4	2	-
Week Two	6	7	7	4
Week Three	13	6	4	3
Week Four	19	5	-	3
Week Five	26	1	-	-

It is apparent that the materials from Weeks Two and Three were unpopular. How much of this reaction should be attributed to the participants' negative reactions to the consultant for those weeks is of course impossible to determine. It should be noted, however, that some of the comments we received were directly critical of the materials themselves. ("Turned off by instructional material." "Redundant and unimportant." "Needed revision and re-editing.")

In an institute characterized by a "parade of stars," special attention must be paid to the problem of transition from one topic to the next, from one consultant to the next. That this need went unmet in the New Hampshire Institute is clear. When asked if the transition from previous weeks of the Institute was satisfactory, participants at the end of Week Two (the transition from Cook to Walbesser at the beginning of that week) were evenly split: 10 said it was, 10 said it was not. Similarly, the transition from Weeks Three to Four (from Walbesser to Stufflebeam) was seen as "satisfactory" by 15 participants and as "unsatisfactory" by 10 others. Throughout the Institute, participants were uncertain about what to expect from each new consultant, consultants were unaware of what their predecessors had done or what their successors were going to do. Once again, the administrative staff of the New Hampshire Institute must be taken to task for failing to handle this very important aspect of the Institute. [Note: Consultants did not (in general) share materials/outline as "promised" at May 24, Washington, D. C. conference.]

Participants were asked at the end of the Institute to make some judgments about the relevance, value, and transportability of the various components of the Institute. For each of the four components of the Institute, over three-fourths of the participants agreed that the material presented could have considerable applicability (this in spite of all the concern about relevance) and that they

personally would be able to put the materials to good use. The majority of the participants also felt that the materials for all components except that involving Stufflebeam (Weeks Four and Five) would be "readily transferrable to other Institutes as an instructional package without requiring that the consultant(s) who presented it here be involved." In direct contrast to this reaction, fewer than half of the participants "would recommend that my colleagues attend a Workshop or Institute which had this topic as its central focus" except for that component involving Weeks Four and Five. For this presentation on evaluation models and techniques, all but one of the participants responding to the Summary Opinionnaire would encourage colleagues to attend such a workshop or institute.

THE INSTITUTE AS A WHOLE

This section is simply a cataloging of some of the summary impressions of the participants about the New Hampshire Institute. First, the Institute achieved its objectives "fairly well" or "very well" for nearly all participants. Secondly, two weeks of behavioral objectives/learning hierarchies was too long, as was one week of Asher and Heisey. (More about that week later.) In retrospect, materials in all components were seen as somewhat-to-very relevant (although the behavioral objectives/learning hierarchies component was rated notably lower than the other three in this respect).

Participants also felt that the content presented was both practical and feasible and that their competencies to conduct evaluation studies and to develop and implement sound decision-making strategies had been enhanced. Finally, after all--well, almost all--was said and done, only two participants indicated that their overall reaction to the Institute was unfavorable.

THE SIXTH WEEK

Why don't we stop fooling ourselves?
The game is over,
Over,
Over.
No good times, no bad times,
There's no times at all....

--Paul Simon, "Overs"

"Major emphasis of this [sixth] week will be on the study of providing the actual leadership within an educational institution in attempting to promote careful study change as a result of carefully constructed research and evaluation efforts...." (Project proposal). In practice, the sixth week consisted of two components: (1) somewhat formalized presentations of poorly prepared (if at all) material by the consultants (Asher and Heisey), which were barely tolerated by most participants; (2) individual conferences with many participants by the consultants, at which time the consultants provided help, advice, and criticism of "research" proposals the participants were developing. This latter activity was reasonably well received by many participants.

Some indications of the general indifference--if not actual negativism--of the participants toward this final week's activities were obtained from the Summary Opinionnaire. Twelve participants (43 per cent) indicated that one week of Asher and Heisey's efforts was too long. Only 14 participants (50 per cent) felt this final week's instruction was likely to be applicable to their own work. Finally, only 12 participants (43 per cent) would recommend to their colleagues that they attend a workshop or institute which had this week's content as its primary focus. If an intended outcome for this week was the preparation of a defensible proposal or plan for educational decision making in the 70s, these are telling judgments delivered by half the participants.

For all intents and purposes, the instructional aspect of the New Hampshire Institute concluded with the end of the fifth week's activities. The sixth week was anticlimactic. The hoped-for synthesis, summarization, and integration of the Institute's content did not occur.

ARE INSTITUTES A VIABLE INSTRUCTIONAL STRATEGY?

This report has to this point been tied rather closely to "hard" data. Along the way we have given hints of some of the issues, some of the questions raised by our perceptions of those data. In this section we depart from our data to present our impressions about several of those issues and to raise the larger question: "Are national summer institutes, bringing together for an extended period of time (e.g., six weeks) a diverse group of participants to consider a wide range of topics (loosely tied to some popular theme), at all feasible in these times?

Administrative Staff

We feel confident that we can offer some appropriate suggestions about characteristics required of the administrative staff if a summer institute like that in New Hampshire is to succeed. First of all, it is imperative that the individual who designs any such institute actually direct it. Not only must he oversee the actual operation of the institute, he must also invest considerable time and effort in the months prior to the start of the institute. It seems unlikely that an institute director can be effective so long as he remains at his "home institution." To do an effective job of running an institute, the director must be free from the entanglements and responsibilities of his regular day-to-day duties. As long as the director remains physically proximate to his home institution, he will find it very difficult to avoid those entanglements.

Sudden emergencies, unexpected complications occur too frequently--particularly in a university setting--for us to be able to assume that a "paper commitment" to an institute will in fact hold up on an assumed 100% basis.

The task of the administrative staff of such an institute is enormous. In fact, its very enormity may dictate that such institutes be abandoned. Logistics, timely funding, communication, facilitation, interpersonal skills, administrative know-how are all essential. To put together a staff possessing all the necessary skills is in itself a complex task. Is it worth it?

Consultants

> I can't believe your song is gone so soon.
> I barely learned the tune
> So soon
> So soon.
>
> --Paul Simon, "So Long, Frank Lloyd Wright"

The "parade of stars" approach to a summer institute may be ego-satisfying to some institute directors. It may meet the needs of a minority of the participants in the institute. But we seriously question its potential for upgrading the skills of participants on any lasting basis. To be exposed to, to meet, to become acquainted with the Cooks, Walbessers, Stufflebeams, et al., is well and good but it does not necessarily serve as an effective or efficient training strategy. Institutes organized around this concept compound the problems by introducing the need for coordination, transition, and organization to an almost impossible degree. The demands such an approach places on staff, consultants, and participants are hard to meet. It is even harder to justify opening the door to those demands in the first place. Is it worth it?

Selection of Participants

> Time,
> Time,
> Time, see what's become of me
> While I looked around for my possibilities.
> I was so hard to please.
> Look around,
> Leaves are brown,
> And the sky is a hazy shade of winter.
>
> --Paul Simon, "A Hazy Shade of Winter"

It is time to quit kidding ourselves. The almost-invariable lateness of funding simply does not allow for any reasonable recruitment and selection procedures to operate. Grandiose schemes, elaborate criteria are just so much verbiage. The notion that a summer institute can serve the needs and desires of a cross-section of America is also unrealistic. An alternative to be considered is a series of narrowly focused, short- or long-term institutes or workshops, each serving a homogeneous group of participants--homogeneous with respect to job responsibilities, educational backgrounds, perhaps even regional locations. Is it worth it?

Participant Observers and the "Monitoring" Component of an Institute

If some naive soul insists on trying to conduct another institute which is organized around the concept of bringing in "expert" consultants for relatively short periods of time to impart their wisdom and knowledge to a heterogeneous group of participants, he should be required to build into his institute an elaborate and detailed external and internal monitoring system. Participant observers, aware and sensitive staff members, and regular formalized participant feedback techniques are all essential. One of the strengths of the New Hampshire Institute was this monitoring system. Such a system is expensive. It is also vitally necessary, especially if heterogeneous participant groups are to be

involved. Once again, the indication is that we might be better off abandoning this concept of institutes than investing resources in efforts to make them work. Is it worth it? This question can be answered for the New Hampshire Institute: Without a monitoring component, it is very doubtful that the Institute would have succeeded at all.

Evaluating an Institute

> I can't say just what is real, all I know is what I feel
> I know
> The time it is today, and we must find our way
>
> --Russ Giguere, "The Time It Is Today"

Earlier in this report we described the procedures and instruments we used in our attempts to evaluate the New Hampshire Institute. We are now going to try to "evaluate the evaluation." We address ourselves to the question: What worked well for what purposes?

Participant observers, while sometimes invaluable to the administrative staff of the New Hampshire Institute, turned out not to be especially useful to us in our evaluation. Perhaps we simply did not know enough about how to make use of them. Perhaps their primary allegiance to the Institute director had some effect. Perhaps the use of participant observers as the "eyes and ears" of external evaluators is inappropriate. Whatever the reasons, we cannot justify the inclusion of participant observers whose primary duties are to serve the external evaluation. If we were running an institute (heaven forbid!), we would insist on having "our" participant observers included. If we were evaluating that institute, we might say, "Participant observers are good to have around. We would like to talk to them now and then. We would like to see any reports they present. But we can get along without them." One participant observer at the

New Hampshire Institute did provide a valuable summary document dealing with some of his more "personal" observations of the participants and the impact of them on the Institute and the Institute on them.

On the other hand, our experience with the New Hampshire Institute gives us no basis for totally rejecting the appropriateness of participant observers in the evaluation process. If they were selected from permanent members of the evaluation staff, they might prove extremely valuable. We do not know. We cannot say. We would like to find out.

Weekly Participant Opinionnaires were quite useful as the Institute progressed. If we had it to do over, however, we would not use the same form week after week. Participants tended to respond "automatically" in later weeks simply because they had become accustomed to the common form. Their utility was limited, however, insofar as an overall evaluation is concerned. To obtain maximum value from these instruments requires that they be dealt with almost immediately following their administration. As formative-evaluation instruments, their function was to provide the Institute staff with feedback about problems as they occurred while there was still time to correct these problems before they became serious. During the six weeks of the New Hampshire Institute some of the potential utility of these instruments was lost because of the one-week to ten-day delay between the time participants responded to the questionnaires and the time the evaluators could provide an analysis and summary of those responses for the Institute staff. Summary Opinionnaires, in contrast, provided a wealth of data for the evaluators.

Site visits, during which evaluators observed, listened, and interviewed, were an integral part of the evaluation. They were an almost-satisfactory substitute for continuous observation and monitoring of the Institute for purposes of an external, summative evaluation.

Is it worth it? As one participant commented on the Summary Opinionnaire, "Institutes such as this are representative of an old world that is rapidly decaying." Such dissatisfaction with the New Hampshire Institute was not typical of the participants, but it does represent a viewpoint with which the evaluators (and we suspect the Institute staff as well) are quite sympathetic. Throughout this final section we have been asking, "Is it worth it?" Our considered answer is "No." We have suggested one alternative, a series of narrowly focused, short- or long-term institutes or workshops, each serving a relatively homogeneous group of participants. There are others we have not considered. As we began to enumerate the factors required for institutes of this ilk to succeed, as we began to ponder the magnitude of the investment in time, personnel, and money required for success, we found ourselves saying, "There must be a better way!"

CIRCE Attitude Scale 1.4b **Name**_____

Different people have different ideas about the evaluation of educational programs. Some believe that maintaining a good school and improving instruction require carefully planned evaluation. Others believe that evaluation activities interfere with teaching and learning, doing more harm than good.

Different people see different purposes for educational evaluation. Certain people are oriented more to pupil behaviors or to classroom conditions or to other aspects of the program.

Responses to the items on this attitude scale provide us with 6 scale scores. When plotted on the profile sheet below they are expected to indicate the respondent's attitudes toward educational evaluation.

Directions for Self Scoring

Start in the opposite corner of this page. For each scale check your sheet to see how you responded to each of the eleven items. For Example, with SCALE V how did you mark Item #2? If you marked it "A" put a check in the parentheses. Put the number of checks in the box. Mark each horizontal scale (at the right) at the number-point shown in its box. Draw your profile by connecting your scores on the five scales, I-V. Then find your CONFIDENCE score.

SCALE I

3 A ( )
11 D ( )
25 A ( )
26 A ( )
30 D ( )
31 A ( )
32 D ( )
33 A ( )
38 A ( )
39 D ( )
49 A ( )
Total ☐

I. A RESEARCH orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that evaluation should rely on precise measurement and statistical analysis to gain **general understanding** of why programs do or do not succeed.

SCALE II

1 A ( )
4 A ( )
6 D ( )
13 D ( )
15 A ( )
16 D ( )
22 A ( )
28 D ( )
30 A ( )
32 A ( )
35 A ( )
Total ☐

II. A SERVICE orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that evaluation should be designed according to the **needs of the educators** involved so as to aid them in their present work and future decisions.

SCALE III

5 A ( )
9 A ( )
17 A ( )
20 D ( )
22 A ( )
23 A ( )
24 A ( )
34 A ( )
36 D ( )
37 A ( )
42 A ( )
Total ☐

III. A TEACHING orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that evaluation should be focused considerably on the **quality of teaching** and should discover the intrinsic merit in facilities and in instruction.

SCALE IV

7 D ( )
9 D ( )
10 A ( )
14 A ( )
15 D ( )
17 D ( )
19 A ( )
36 A ( )
37 D ( )
41 A ( )
43 A ( )
Total ☐

IV. OBJECTIVES orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that [illegible] therefore evaluation, should be focused considerably on apriori statements of objectives, that the merit of the program is largely indicated by the **success of students** in reaching those objectives.

SCALE V

Item 2 A ( )
4 A ( )
6 A ( )
12 D ( )
21 A ( )
27 A ( )
28 D ( )
31 D ( )
34 A ( )
39 A ( )
44 A ( )
Total ☐

V. A JUDGMENT orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that educational evaluation is largely a matter of establishing the worth of the program for various purposes **as perceived** by various groups of persons in and around the program.

START ------

To obtain an overall..... **CONFIDENCE IN EVALUATION** score, do the same thing with the check-list at the right.

0 1 2 3 4 5 6 7 8 9 10 11

☐

Confidence Scale

Item 8 D ( )
12 D ( )
15 A ( )
18 D ( )
29 A ( )
34 A ( )
40 D ( )
45 A ( )
46 A ( )
47 A ( )
48 A ( )

CIRCE Attitude Scale No. 1.4 Name _____

Attitudes toward Educational Evaluation. Below are a number of statements about the evaluation of educational programs. A program can be a lesson, a course, a whole curriculum, or any training activity. Consider each statement as a statement of opinion. If you agree at least a little bit with the statement, circle the letter A. If you disagree even a little bit with the statement, circle the letter D. If you both agree and disagree, or if you have no opinion, leave the letters uncircled.

A = AGREE **D = DISAGREE** **Blank = Neither**

1. A D The **major** purpose of an educational evaluation study should be to gather information that will be helpful to the educators.

2. A D It is important for the program evaluator to find out how well various people like the program.

3. A D Generally speaking, an educational program should be evaluated with reference to one or more "control" programs.

4. A D The evaluator should accept the responsibility of finding the strongest, most defensible, and publicly attractive points of the program.

5. A D In evaluating a program, it is at least as important to study and report on the types of teaching as it is to study and report on the amount of learning.

6. A D The evaluator should draw a conclusion as to whether or not the goals of the program are worthwhile.

7. A D It is more important to evaluate a program in comparison to what other programs do than to evaluate it with reference to what its objectives say it should do.

8. A D Principals and superintendents should not gather data about the quality of instruction in the classroom.

9. A D The task of putting educational objectives into writing is **more** the responsibility of the evaluator than that of the educator.

10. A D It is essential that the full array of educational objectives be stated before the program begins.

11. A D Evaluation studies would improve if they gathered more kinds of information, even if at the expense of gathering less reliable information.

12. A D Evaluators should ignore data that cannot be objectively verified.

13. A D Education should have more of an engineering orientation than it now has.

14. A D The job of an evaluator is mostly one of finding out how well students learn what they are supposed to learn.

15. A D Evaluation should aid an educator in revising his goals even while the program is in progress.

16. A D The process of decision-making about the curriculum is one of the weakest links in the present operation of the schools.

17. A D Educators have some important aims that **cannot** be stated adequately by anyone in terms of student behaviors.

18. A D Information from an evaluation study is not worth the trouble it makes.

19. A D The first job in instruction is the formulation of a statement of objectives.

20. A D A teacher should tell his students any and all of his teaching objectives.

21. A D The **major** purpose of educational evaluation is to find out the worth of what is happening.

22. A D The evaluator should be a facilitator more than a critic or reformer or scholar.

23. A D Some school experiences are desirable because they round out a child's life—whether or not they increase his competence or change his attitudes.

Please turn over

24. A D An evaluator should find out if the teaching is in fact the kind that the school faculty expects it to be.

25. A D Whether or not an evaluation report is any good should be decided pretty much on the same grounds that research journal editors use to decide whether or not a manuscript should be published.

26. A D The main purpose of evaluation is to gain understanding of the causes of good instruction.

27. A D Description and value judgment are equally important components of evaluation.

28. A D In conducting an evaluation, there is no justification for the exercise of subjective judgment of any kind by the evaluator.

29. A D Educational evaluation is a necessary step in the everyday operation of the school.

30. A D The strategy of evaluation should be chosen primarily in terms of the particular needs the sponsors have for evaluation data.

31. A D The educational evaluator should attempt to conceal all of his personal judgment of the worth of the program he is evaluating.

32. A D The sponsor of an evaluation should have the final say-so in choosing or eliminating variables to be studied.

33. A D The main purpose of educational evaluation is to find out what methods of instruction work for different learning situations.

34. A D Parents' attitudes should be measured as part of the evaluation of school programs.

35. A D An evaluator finds it almost impossible to do his job without intruding upon the operation of the program at least a little.

36. A D All important educational aims can be expressed in terms of student behaviors.

37. A D Some educational goals are best expressed in terms of teacher behaviors.

38. A D It is essential that evaluation studies be designed so that the findings are generalizable to other curricula.

39. A D An evaluation study should pay less attention to the statistical significance of a finding than an instructional research study would.

40. A D Evaluation interferes with the running of schools more than it helps.

41. A D Little evaluation planning can be done before you get a statement of instructional objectives.

42. A D The leader of an evaluation team should be a teacher.

43. A D The entire school day and the entire school experience should be divided up and assigned to the pursuit of stated educational goals.

44. A D An evaluation of an educational program should include a critical analysis of the value of the goals of the program.

45. A D Every teacher should have formal ways of gathering information about the strengths and shortcomings of his instructional program.

46. A D Money spent on evaluation contributes more to the improvement of education than any other expenditure.

47. A D There just is no way that careful and honest evaluation can hurt a school program.

48. A D If an evaluation study is well designed, the primary findings are likely to improve decisions made by administrators, teachers, and students themselves.

49. A D When the evaluator has to choose between helping this staff run its program better and helping educators everywhere understand all programs a little better he should choose the latter.

INSTITUTE PARTICIPANT OPINIONNAIRE

CIRCE
Summer 1970

5-DIGIT CODE

DIRECTIONS: The following items have been written to enable you to say how you feel about several aspects of an instructional week of your Institute. Check one response category for each question and comment if you wish to clarify your response.

Select any 5-digit code number and use it throughout the Institute on these opinionnaires.

	Yes	Yes-"but"	No	I don't know
1. Are you enjoying yourself at this Institute?	☐	☐	☐	☐
Comment: _____				
2. Are you getting the chance to talk to the staff as much as you would like to?	☐	☐	☐	☐
Comment: _____				
3. In your opinion, is the entire Institute well-organized?	☐	☐	☐	☐
Comment: _____				
4. Has the general administration of this past week been well-organized?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
5. Have you been getting along well with other participants at the Institute?	☐	☐	☐	☐
Comment: _____				
6. Did you enjoy the instructional staff for this week?	☐	☐	☐	☐
Comment: _____				
7. Do you feel you learned a lot this week?	☐	☐	☐	☐
Comment: _____				
8. Is the Institute paying enough attention to your important problems?	☐	☐	☐	☐
Comment: _____				
9. Would your professional peers back home be interested in what you learned this week?	☐	☐	☐	☐
Comment: _____				
10. Do you think you could teach another group what you have learned this week?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
11. Is the Institute meeting your personal expectations for it?	☐	☐	☐	☐
Comment: _____				
12. Have the staff failed to change or correct certain matters that were brought to their attention?	☐	☐	☐	☐
Comment: _____				
13. Are you getting the chance to study as much as you would like to?	☐	☐	☐	☐
Comment: _____				
14. Are you getting sufficient opportunity to socialize and recreate?	☐	☐	☐	☐
Comment: _____				
15. Was the content for this week challenging and important?	☐	☐	☐	☐
Comment: _____				
16. Are you working hard enough?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
17. Did this week "hang together" as an instructional whole for you?	☐	☐	☐	☐
Comment: _____				
18. Would you want to teach another group what you have learned this week?	☐	☐	☐	☐
Comment: _____				
19. Should the presentation for this week have been preceded with more readings, discussion, background materials?	☐	☐	☐	☐
Comment: _____				
20. Would you recommend including all or part of this week in a package to be used in summer institutes elsewhere?	☐	☐	☐	☐
Comment: _____				

21. If you have a message for the people running this Institute, please write it here:

_____

_____

_____

_____

_____

SUMMARY OPINIONNAIRE

CIRCE
Summer 1970

SUMMARY

5-DIGIT CODE

DIRECTIONS: Throughout this Institute you have told us how you feel about a number of aspects of the instructional program of this Institute. Now we are asking for some OVERALL reactions. Check one response category for each item, and comment if you wish to clarify your response.

Please use the same 5-digit code on this Opinionnaire that you have been using throughout the Institute.

1. To what extent do you feel the following objectives were achieved:

	Very Well	Fairly Well	Mini-mally	Not At All
a. An understanding of the problems inherent in the management of an educational evaluation project.	11	15	1	0
b. A knowledge of methods and procedures for evaluating those curriculum changes with which you as an Institute participant are concerned.	9	16	3	0
c. An awareness of the major alternatives available in terms of educational research methodologies.	8	12	6	1
d. An understanding of the relationship of evaluation to the problems associated with the development, dissemination, and adoption process in educational innovation.	8	18	3	0
e. A familiarity with communications techniques applicable to proper implementation of the decision-making process at various levels of the educational system.	9	16	3	0

2. You probably had some personal objectives which were not the same as those of the Institute. If so, would you indicate below (briefly, please) what they were and how well they were achieved.

(MOST COMMONLY OCCURRING OBJECTIVES)	Very Well	Fairly Well	Mini-mally	Not At All
a. To write a proposal	11	15	6	3
b. To share ideas with others				
c. To observe evaluation models				

3. For each of the four major sections of this Institute, indicate whether time allocated was too little, about right, or too much:

	Too Little	About Right	Too Much
a. Cook: One week was--	10	13	[illegible]
b. Walbesser: Two weeks was--	3	7	17
c. Stufflebeam: Two weeks was--	8	18	1
d. Asher: One week was--	7	9	12

4. For each of the four major sections of the Institute, indicate by checking the appropriate box the extent to which you think the material presented during that section was relevant to your own activities or concerns:

	Very Relevant	Somewhat Relevant	Slightly Relevant	Not Relevant
a. Section One (Cook)	5	18	4	1
b. Section Two (Walbesser)	9	9	8	2
c. Section Three (Stufflebeam)	22	4	2	0
d. Section Four (Asher)	9	11	5	3

For the following items, please mark the appropriate box, using these alternatives:

SA = strongly agree
A = agree
U = undecided
D = disagree
SD = strongly disagree

	SA	A	U	D	SD
5. The content of this Institute has direct practical utility in my institution.	14	12	2	1	0

Comment: _____

_____

_____

	SA	A	U	D	SD
6. In general, the approaches presented here are not feasible in my institution.	0	2	0	21	4

Comment: _____

_____

_____

7. The benefit I derived from the Institute was not worth my expenditure of time.

SA	A	U	D	SD
1	1	3	10	10

Comment: _____

8. This Institute compared favorably, overall, with other institutes I have attended.

SA	A	U	D	SD	Does Not Apply
4	11	0	1	1	8

Comment: _____

9. The diversity in content and approach presented by the consultants was:

a. Appropriate to the objectives of the Institute.

SA	A	U	D	SD
0	12	6	4	3

Comment: _____

b. Satisfactory to me personally.

SA	A	U	D	SD
5	15	4	2	1

Comment _____

c. Too great for me to be able to assimilate and integrate things as well as I would have liked.

SA	A	U	D	SD
2	3	1	17	3

Comment: _____

	SA	A	U	D	SD
10. If this Institute were to be offered again, I would recommend to others like myself that they attend it.	9	12	4	2	1

Comment: _____

_____

_____

	SA	A	U	D	SD
11. Consultants were generally not available for questions and discussion outside of the times scheduled for formal presentations.	0	1	0	15	11

Comment: _____

_____

_____

12. After participating in the Institute, I feel more competent:

	SA	A	U	D	SD
a. To approach and conduct evaluation studies	7	18	2	0	0
b. To design and carry out research projects	4	14	7	3	2
c. To develop and implement sound decision-making strategies.	7	20	1	0	0

13. For each of the following descriptive statements, indicate by checking the appropriate box(es) which of the sections of the Institute it applies to. The following code is used for the column headings:

(1) = Project management models and techniques (Cook)

(2) = Behavioral objectives, design of assessment tasks, and construction of learning sequences (Walbesser et al.)

(3) = Evaluation models and techniques, seminars on problematic simulations (Stufflebeam, Guba, and Hammond)

(4) = Problems associated with developing, disseminating, and adopting educational innovations (Asher and Heisley)

	(1)	(2)	(3)	(4)
a. This material could have considerable applicability to my work at my own institution.	17	16	23	14
b. I really don't see how this could apply to the problems with which I have to work.	3	4	2	4
c. It's likely that I will be able to put this to good use.	18	18	24	18
d. I don't see how this material could be included in another Institute in the absence of the consultant(s) who presented it here.	3	4	10	2
e. This material would be readily transferrable to other Institutes as an instructional package, without requiring that the consultant(s) who presented it here be involved.	19	16	7	16
f. I would recommend that my colleagues attend a Workshop or Institute which had this topic as its central focus.	13	12	26	12

14. How would you describe each of the following aspects of the Institute? (Please check the appropriate response.)

	Excellent	O.K.	Undecided	Inadequate	Poor
Facilities	12	15	0	2	0
Time schedule	4	20	2	2	0
Budget	7	12	6	3	1
Format	3	11	8	3	3
Materials	14	11	2	1	0
Equipment	8	14	5	1	0
Staff (Al Elwell, Mo Oliver, Ev Barnes)	12	9	3	2	1
Consultants	13	11	4	0	0
Participant Observers (Charles Williamson, Stuart Pickard)	9	6	8	3	2
Participants	5	13	5	4	0
Food	7	9	4	0	2

15. Which of the following best describes your overall reaction to the Institute?

9	14	1	2	0
Very Favorable	Favorable	Undecided	Unfavorable	Very Unfavorable

16. A six-week time allocation for an Institute like this one is:

2	9	9	5	1
Much too long	A little too long	About right	A little too short	Much too short

17. Do you have any message for the staff, consultants, or evaluators of this Institute?

CIRCE Attitude Scale No. 1.4

Attitudes toward Educational Evaluation [illegible]

[illegible]

A AGREE D DISAGREE Blank Neither

1. A D The **major** purpose of [illegible]

2. A D It is [illegible] for the program [illegible]

3. A D Generally speaking, an educational [illegible] programs.

4. A D The evaluator should accept the responsibility [illegible] of the program.

5. A D In evaluating a program it is at least as important to study an [illegible] study and report on the amount of learning.

6. A D The evaluator should draw a conclusion as to whether or not the goals of the program are worthwhile.

7. A D It is more important to evaluate a program in comparison to what other programs do than to evaluate it in reference to what its objectives say it should do.

8. A D Principals and superintendents should not gather data about the quality of instruction in the classroom.

9. A D The task of putting educational objectives into writing is **more** the responsibility of the evaluator than that of the educator.

10. A D It is essential that the full array of educational objectives be stated before the program begins.

11. A D Evaluation studies would improve if they gathered more kinds of information, even if at the expense of gathering less reliable information.

12. A D Evaluators should ignore data that cannot be objectively verified.

13. A D Education should have more of an engineering orientation than it now has.

14. A D The job of an evaluator is mostly one of finding out how well students learn what they are supposed to learn.

15. A D Evaluation should aid an educator in revising his goals even while the program is in progress.

16. A D The process of decision-making about the curriculum is one of the weakest links in the present operation of the schools.

17. A D Educators have some important aims that **cannot** be stated adequately by anyone in terms of student behaviors.

18. A D Information from an evaluation study is not worth the trouble it makes.

19. A D The first job in instruction is the formulation of a statement of objectives.

20. A D A teacher should tell his students any and all of his teaching objectives.

21. A D The **major** purpose of educational evaluation is to find out the worth of what is happening.

22. A D The evaluator should be a facilitator more than a critic or reformer or scholar.

23. A D Some school experiences are desirable because they round out a child's life—whether or not they increase his competence or change his attitudes.

Please turn over

24. A D An evaluator should find out if the teaching is in fact the kind that the school faculty expects it to be.

25. A D Whether or not an evaluation report is any good should be decided pretty much on the same grounds that research journal editors use to decide whether or not a manuscript should be published.

26. A D The main purpose of evaluation is to gain understanding of the causes of good instruction.

27. A D Description and value judgment are equally important components of evaluation.

28. A D In conducting an evaluation, there is no justification for the exercise of subjective judgment of any kind by the evaluator.

29. A D Educational evaluation is a necessary step in the everyday operation of the school.

30. A D The strategy of evaluation should be chosen primarily in terms of the particular needs the sponsors have for evaluation data.

31. A D The educational evaluator should attempt to conceal all of his personal judgment of the worth of the program he is evaluating.

32. A D The sponsor of an evaluation should have the final say-so in choosing or eliminating variables to be studied.

33. A D The main purpose of educational evaluation is to find out what methods of instruction work for different learning situations.

34. A D Parents' attitudes should be measured as part of the evaluation of school programs.

35. A D An evaluator finds it almost impossible to do his job without intruding upon the operation of the program at least a little.

36. A D All important educational aims can be expressed in terms of student behaviors.

37. A D Some educational goals are best expressed in terms of teacher behaviors.

38. A D It is essential that evaluation studies be designed so that the findings are generalizable to other curricula.

39. A D An evaluation study should pay less attention to the statistical significance of a finding than an instructional research study would.

40. A D Evaluation interferes with the running of schools more than it helps.

41. A D Little evaluation planning can be done before you get a statement of instructional objectives.

42. A D The leader of an evaluation team should be a teacher.

43. A D The entire school day and the entire school experience should be divided up and assigned to the pursuit of stated educational goals.

44. A D An evaluation of an educational program should include a critical analysis of the value of the goals of the program.

45. A D Every teacher should have formal ways of gathering information about the strengths and shortcomings of his instructional program.

46. A D Money spent on evaluation contributes more to the improvement of education than any other expenditure.

47. A D There just is no way that careful and honest evaluation can hurt a school program.

48. A D If an evaluation study is well designed, the primary findings are likely to improve decisions made by administrators, teachers, and students themselves.

49. A D When the evaluator has to choose between helping this staff run its program better and helping educators everywhere understand all programs a little better he should choose the latter.

CIRCE Attitude Scale 1.4b Name

Different people have different ideas about the [illegible] Some believe that maintaining a good school and [illegible] carefully planned evaluation. Others believe [illegible] with teaching and learning, doing more harm than good.

Different people see different purposes for educational evaluation. Certain people are oriented more to pupil behaviors or to classroom conditions or to other aspects of the program.

Responses to the items on this attitude scale provide us with 6 scale scores. When plotted on the profile sheet below they are expected to indicate the respondent's attitudes toward educational evaluation.

SCALE I

3 A ( )
11 D ( )
25 A ( )
26 A ( )
30 D ( )
31 A ( )
32 D ( )
33 A ( )
38 A ( )
39 D ( )
49 A ( )
Total ☐

SCALE II

1 A ( )
4 A ( )
6 D ( )
13 D ( )
15 A ( )
16 D ( )
22 A ( )
28 D ( )
30 A ( )
32 A ( )
35 A ( )
Total ☐

SCALE III

5 A ( )
9 A ( )
17 A ( )
20 D ( )
22 A ( )
23 A ( )
24 A ( )
34 A ( )
36 D ( )
37 A ( )
42 A ( )
Total ☐

SCALE IV

7 D ( )
9 D ( )
10 A ( )
14 A ( )
15 D ( )
17 D ( )
19 A ( )
36 A ( )
37 D ( )
41 A ( )
43 A ( )
Total ☐

SCALE V

Item 2 A ( )
4 A ( )
6 A ( )
12 D ( )
21 A ( )
27 A ( )
28 D ( )
31 D ( )
34 A ( )
39 A ( )
44 A ( )
Total ☐

START .....

I. A RESEARCH orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that evaluation should rely on precise measurement and statistical analysis to gain **general understanding** of why programs do or do not succeed.

II. A SERVICE orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that evaluation should be designed according to the **needs of the educators** involved so as to aid them in their present work and future decisions.

III. A TEACHING orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that evaluation should be focused considerably on the **quality of teaching** and should discover the intrinsic merit in facilities and in instruction.

IV. OBJECTIVES orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that instruction, and therefore evaluation, should be focused considerably on apriori statements of objectives, that the merit of the program is largely indicated by the **success of students** in reaching those objectives.

V. A JUDGMENT orientation to Evaluation 0 1 2 3 4 5 6 7 8 9 10 11

The person high on this scale appears to believe that educational evaluation is largely a matter of establishing the worth of the program for various purposes **as perceived** by various groups of persons in and around the program.

To obtain an overall..... **CONFIDENCE IN EVALUATION** score, do the same thing with the check-list at the right.

0 1 2 3 4 5 6 7 8 9 10 11

☐

Confidence Scale

Item 8 D ( )
12 D ( )
15 A ( )
18 D ( )
29 A ( )
34 A ( )
40 D ( )
45 A ( )
46 A ( )
47 A ( )
48 A ( )

INSTITUTE PARTICIPANT OPINIONNAIRE

CIRCE
Summer 1970

5-DIGIT CODE

DIRECTIONS: The following items have been written to enable you to say how you feel about several aspects of an instructional week of your Institute. Check one response category for each question and comment if you wish to clarify your response.

Select any 5-digit code number and use it throughout the Institute on these opinionnaires.

	Yes	Yes-"but"	No	I don't know
1. Are you enjoying yourself at this Institute?	☐	☐	☐	☐
Comment: _____				
2. Are you getting the chance to talk to the staff as much as you would like to?	☐	☐	☐	☐
Comment: _____				
3. In your opinion, is the entire Institute well-organized?	☐	☐	☐	☐
Comment: _____				
4. Has the general administration of this past week been well-organized?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
5. Have you been getting along well with other participants at the Institute?	☐	☐	☐	☐
Comment: _____				
6. Did you enjoy the instructional staff for this week?	☐	☐	☐	☐
Comment: _____				
7. Do you feel you learned a lot this week?	☐	☐	☐	☐
Comment: _____				
8. Is the Institute paying enough attention to your important problems?	☐	☐	☐	☐
Comment: _____				
9. Would your professional peers back home be interested in what you learned this week?	☐	☐	☐	☐
Comment: _____				
10. Do you think you could teach another group what you have learned this week?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
11. Is the Institute meeting your personal expectations for it?	☐	☐	☐	☐
Comment: _____				
12. Have the staff failed to change or correct certain matters that were brought to their attention?	☐	☐	☐	☐
Comment: _____				
13. Are you getting the chance to study as much as you would like to?	☐	☐	☐	☐
Comment: _____				
14. Are you getting sufficient opportunity to socialize and recreate?	☐	☐	☐	☐
Comment: _____				
15. Was the content for this week challenging and important?	☐	☐	☐	☐
Comment: _____				
16. Are you working hard enough?	☐	☐	☐	☐
Comment: _____				

	Yes	Yes-"but"	No	I don't know
17. Did this week "hang together" as an instructional whole for you?	☐	☐	☐	☐
Comment: _____				
18. Would you want to teach another group what you have learned this week?	☐	☐	☐	☐
Comment: _____				
19. Should the presentation for this week have been preceded with more readings, discussion, background materials?	☐	☐	☐	☐
Comment: _____				
20. Would you recommend including all or part of this week in a package to be used in summer institutes elsewhere?	☐	☐	☐	☐
Comment: _____				

21. If you have a message for the people running this Institute, please write it here:

_____

_____

_____

_____

_____

22. Do you have a message for an instructor or visiting consultant who worked in the Institute this week? Please write it here.

_____

_____

_____

_____

_____

23. If you were restricted to a sentence or two, how would you describe the main idea of this past week?

_____

_____

_____

_____

_____

24. Was the transition from the previous week(s) to this week of the Institute satisfactory?

☐ yes ☐ no

If "no," please comment: _____

_____

25. Grade this past week of the Institute.

☐ A ☐ B ☐ C ☐ D ☐ F

Recheck your 5-digit code number on page 1. Thank you.

CIRCE

SUMMARY OPINIONNAIRE

CIRCE
Summer 1970

5-DIGIT CODE

IRECTIONS: Throughout this Institute you have told us how you feel about a umber of aspects of the instructional program of this Institute. Now we are sking for some OVERALL reactions. Check one response category for each item, nd comment if you wish to clarify your response.

lease use the same 5-digit code on this Opinionnaire that you have been using hroughout the Institute.

. To what extent do you feel the following objectives were achieved:

	Very Well	Fairly Well	Mini-mally	Not At All
a. An understanding of the problems inherent in the management of an educational evaluation project.	☐	☐	☐	☐
b. A knowledge of methods and procedures for evaluating those curriculum changes with which you as an Institute participant are concerned.	☐	☐	☐	☐
c. An awareness of the major alternatives available in terms of educational research methodologies.	☐	☐	☐	☐
d. An understanding of the relationship of evaluation to the problems associated with the development, dissemination, and adoption process in educational innovation.	☐	☐	☐	☐
e. A familiarity with communications techniques applicable to proper implementation of the decision-making process at various levels of the educational system.	☐	☐	☐	☐

2. You probably had some personal objectives which were not the same as those of the Institute. If so, would you indicate below (briefly, please) what they were and how well they were achieved.

	Very Well	Fairly Well	Mini-mally	Not At All
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

3. For each of the four major sections of this Institute, indicate whether time allocated was too little, about right, or too much:

	Too Little	About Right	Too Much
a. Cook: One week was--	☐	☐	☐
b. Walbesser: Two weeks was--	☐	☐	☐
c. Stufflebeam: Two weeks was--	☐	☐	☐
d. Asher: One week was--	☐	☐	☐

4. For each of the four major sections of the Institute, indicate by checking the appropriate box the extent to which you think the material presented during that section was relevant to your own activities or concerns:

	Very Relevant	Somewhat Relevant	Slightly Relevant	Not Relevant
a. Section One (Cook)	☐	☐	☐	☐
b. Section Two (Walbesser)	☐	☐	☐	☐
c. Section Three (Stufflebeam)	☐	☐	☐	☐
d. Section Four (Asher)	☐	☐	☐	☐

For the following items, please mark the appropriate box, using these alternatives:

SA = strongly agree
A = agree
U = undecided
D = disagree
SD = strongly disagree

5. The content of this Institute has direct practical utility in my institution. SA ☐ A ☐ U ☐ D ☐ SD ☐

Comment: _____

_____

_____

6. In general, the approaches presented here are not feasible in my institution. SA ☐ A ☐ U ☐ D ☐ SD ☐

Comment: _____

_____

_____

7. The benefit I derived from the Institute was not worth my expenditure of time.

SA	A	U	D	SD
☐	☐	☐	☐	☐

Comment: _____

_____

_____

8. This Institute compared favorably, overall, with other institutes I have attended.

SA	A	U	D	SD	Does Not Apply
☐	☐	☐	☐	☐	☐

Comment: _____

_____

_____

9. The diversity in content and approach presented by the consultants was:

a. Appropriate to the objectives of the Institute.

SA	A	U	D	SD
☐	☐	☐	☐	☐

Comment: _____

_____

_____

b. Satisfactory to me personally.

SA	A	U	D	SD
☐	☐	☐	☐	☐

Comment _____

_____

_____

c. Too great for me to be able to assimilate and integrate things as well as I would have liked.

SA	A	U	D	SD
☐	☐	☐	☐	☐

Comment: _____

_____

_____

10. If this Institute were to be offered again, I would recommend to others like myself that they attend it. SA ☐ A ☐ U ☐ D ☐ SD ☐

Comment: _____

_____

_____

11. Consultants were generally not available for questions and discussion outside of the times scheduled for formal presentations. SA ☐ A ☐ U ☐ D ☐ SD ☐

Comment: _____

_____

_____

12. After participating in the Institute, I feel more competent:

a. To approach and conduct evaluation studies SA ☐ A ☐ U ☐ D ☐ SD ☐

b. To design and carry out research projects SA ☐ A ☐ U ☐ D ☐ SD ☐

c. To develop and implement sound decision-making strategies. SA ☐ A ☐ U ☐ D ☐ SD ☐

13. For each of the following descriptive statements, indicate by checking the appropriate box(es) which of the sections of the Institute it applies to. The following code is used for the column headings:

(1) = Project management models and techniques (Cook)

(2) = Behavioral objectives, design of assessment tasks, and construction of learning sequences (Walbesser et al.)

(3) = Evaluation models and techniques, seminars on problematic simulations (Stufflebeam, Guba, and Hammond)

(4) = Problems associated with developing, disseminating, and adopting educational innovations (Asher and Heisley)

	(1)	(2)	(3)	(4)
a. This material could have considerable applicability to my work at my own institution.				
b. I really don't see how this could apply to the problems with which I have to work.				
c. It's likely that I will be able to put this to good use.				
d. I don't see how this material could be included in another Institute in the absence of the consultant(s) who presented it here.				
e. This material would be readily transferrable to other Institutes as an instructional package, without requiring that the consultant(s) who presented it here be involved.				
f. I would recommend that my colleagues attend a Workshop or Institute which had this topic as its central focus.				

14. How would you describe each of the following aspects of the Institute? (Please check the appropriate response.)

	Excel-lent	O.K.	Un-decided	Inad-equate	Poor
Facilities					
Time schedule					
Budget					
Format					
Materials					
Equipment					
Staff (Al Elwell, Mo Oliver, Ev Barnes)					
Consultants					
Participant Observers (Charles Williamson, Stuart Pickard)					
Participants					
Food					

15. Which of the following best describes your overall reaction to the Institute?

Very Favorable	Favorable	Undecided	Unfavorable	Very Unfavorable
☐	☐	☐	☐	☐

16. A six-week time allocation for an Institute like this one is:

Much too long	A little too long	About right	A little too short	Much too short
☐	☐	☐	☐	☐

17. Do you have any message for the staff, consultants, or evaluators of this Institute?

PARTICIPANT OBSERVER'S DAILY LOG NHUI

I. Facilitators:

events, people, decisions--
Arrangements that had a positive effect on some facet of the Institute.

II. Inhibitors:

events, people, decisions--
Arrangements that had a negative effect on some facet of the Institute.

III. Participants' quotes:

Quotable quotes that reveal participants' views, goals, satisfactions disappointments, etc.

IV. Human Relations:

Especially along the dimensions of age, sex, race, and lodging location.

Interviewee

INSTITUTE STAFF SITE-VISIT
INTERVIEW FORM

Institute

Date

*Greatest strength:

Interviewer

*Greatest weakness:

*Problems solved:

*Problems persisting:

*Principal intent of UNHI:

*Freebee:

EVALUATION OF THE INSTRUCTIONAL EFFECTIVENESS OF THE 1967 to 1970 SUMMER RESEARCH TRAINING INSTITUTES CONDUCTED AT THE UNIVERSITY OF NEW HAMPSHIRE

1967 - *Researching Crucial Educational Issues in Northern New England*

1968 - *Researching and Evaluating Educational Innovation in New England*

1969 - *The Challenge of Assessing Curriculum Changes in New England*

1970 - *Planning for Educational Decision-Making in the 70's*

INTRODUCTION

Since 1967 the Bureau of Educational Research and Testing Services has conducted for the U.S. Office of Education a series of four (4) summer research training institutes. In 1970, while considering applying for the fourth summer institute program, the Institute Director discussed with staff members of the Research Training Branch, -- USOE, the possibility of funding as part of the fourth summer program, a participant follow-up study of all four summer institutes. The general purpose for the follow-up study was to provide an opportunity to gather data from past participants relative to the instructional effectiveness of the summer institute program. Specifically, the objectives for the follow-up study were stated as follows: (1) to gain some insight from past participants as to the relative strengths and weaknesses of the summer institutes they had attended and (2) to determine the value of the instructional programs as perceived by the participants during the summer institute itself and as viewed from their present job positions in the educational profession.

Therefore, this section of the report represents two different assessments of what has happened to the participants as a result of their involvement in the summer institute programs.

GEOGRAPHICAL REPRESENTATION OF INSTITUTE PARTICIPANTS

The geographical representation of institute participants for the last four years is summarized in Table A.

TABLE A

Geographical Representation of Institute Participants

1967 to 1970

	New Hampshire	Northern New England	New England	National
	1967	1968	1969	1970
Connecticut		1		1
Florida				2
Georgia				2
Hawaii				1
Iowa				2
Louisiana				2
Maine	4	6	2	
Massachusetts		2	3	3
Michigan				1
Mississippi				2
Montana				2
New Hampshire	16	13	22	1
North Carolina				1
Rhode Island				1
Siapan				1
South Carolina				1
Tennessee				3
Texas				2
Virginia				1
Vermont	10	3	2	
	30	25	29	29

Statements of instructional objectives for the four (4) Summer Institute Programs are presented in Appendix C of this report.

The first and most extensive part of this section of the report includes a presentation of the results based upon an extensive questionnaire prepared by the BERTS staff. The questionnaires were sent to 112 participants. Of that number, we received a response from 67 participants, for a return rate of 60%. One of the major problems encountered in receiving responses from former participants, was the lack of accurate forwarding addresses. The Bureau attempted an extensive check on the mobility of participants and only as a result of this effort we were able to receive the number of responses indicated.

The questionnaires were mailed from the Bureau of Educational Research and Testing Services on March 15, 1970 with a requested return deadline of May 1, 1970. The return rate by year varied considerably. In 1967, 29 participants were trained and we received 14 responses for a return rate of 48.3%. In 1968, 25 participants were trained and we received 9 responses for a return rate of 36%. In 1969 29 participants were trained and we received 21 responses for a return rate of 72.4%. And in 1970, 29 participants were trained and we received 23 responses for a return rate of 79.3%.

The second major evaluation effort focused on an on-site evaluation, conducted principally by a participant-observer in the 1970 Institute who served as a field evaluator. The follow-up study focused primarily on site visits to a selected number of 1970 participants, although where it was possible, the BERTS staff interviewed participants from previous years.

EVALUATION OF THE INSTRUCTIONAL EFFECTIVENESS OF THE 1967 to 1970 SUMMER RESEARCH TRAINING INSTITUTES CONDUCTED AT THE UNIVERSITY OF NEW HAMPSHIRE

SECTION I

RESULTS OF PARTICIPANT FOLLOW-UP QUESTIONNAIRE

FOLLOW-UP EVALUATION QUESTIONNAIRE

The questionnaire* was seventeen (17) questions long and dealt with various aspects of the institute programs. In this part of the report, responses to each question are followed by a brief commentary.

Question 1 -- *How many programs/project proposals did you initiate prior to attending your institute?*

The response to Question 1 across the four years would seem to indicate that with increasing frequency the participants had in fact had some experience with writing proposals previous to attending the institutes. This, perhaps represents a growing awareness on the part of various educational agencies, of a need for competency in this particular area.

1967			*1968*		
Proposals	(17)		Proposals	(12)	
Participants	(14)	1.2	Participants	(9)	1.3

1969			*1970*		
Proposals	(6)		Proposals	(48)	
Participants	(21)	.3	Participants	(23)	2.1

*See copy in Appendix C

Question 2 -- *How many program/project proposals did you initiate/write* <u>*since*</u> *attending your institute?*

The response pattern to this question seems to clearly indicate that the number of proposals written by the participants dramatically increased subsequent to their participation in the institutes. Even in so short a period as one year since the 1970 summer institute, thirty-six (36) proposals have been in fact created.

1967			*1968*		
Proposals	(17)		Proposals	(33)	
Participants	(14)	2.1	Participants	(9)	3.7

1969			*1970*		
Proposals	(29)		Proposals	(36)	
Participants	(21)	1.4	Participants	(23)	1.6

Question 3 -- *Since attending the institute have you written/initiated any of the following: Proposals (Federal, State, local); evaluations; research studies?*

This question does not lend itself particularly well to statistical treatment. In general, it is safe to say that projects written/submitted subsequent to their involvement in the institutes were oriented more towards state and local activities. It is fair to say that their post-institute efforts reflected action type research rather than formal research type studies. This would be in line with the general professional responsibilities that these people tended to carry in their local educational or state agencies.

Question 4 -- *My job role and/or function, since attending the institute has changed from _____ to _____?*

Although the responses to this question do not necessarily lend themselves to statistical treatment, the responses are indeed worth noting. Thus, the reader is referred to APPENDIX C, for a listing of participant job changes since attending the institutes. Because it is extremely difficult to determine a direct causal relationship between participating in the institute and subsequent job changes, we have intentionally avoided a detailed analysis of job changes (see Question #11 for participants perception of significant job changes).

Question 5 -- *What is the present status of the program/project proposal you were required to submit as part of your Institute experience?*

It is clear from the data below that from a third (1/3) to one-half (1/2) of the proposals developed by the participants were pursued to completion. The range and variety of funding sources which are reported on the questionnaire are too numerous to present here but let us offer just a summary of relevant indexes.

A considerable number of these projects were funded as part of local Title I efforts both in the elementary and secondary schools. One rather large Title III project was funded in excess of $45,000. There have been so far, two research publications, one in the Science Educator and one in the Florida Journal of Educational Research which were direct products of the 1970 institute. Additionally, one doctoral dissertation being completed is also a direct outgrowth of involvement in the 1970 Institute.

It would seem fair to generalize from the responses to Question 5, that the participants did in fact pursue the research and/or evaluation activities initiated during their involvement in the institute program. The majority of the proposals have in fact been implemented.

1967		*1968*	
Active/Implemented	(3)	Active/Implemented	(4)
Not Implemented	(9)	Not Implemented	(5)

1969		*1970*	
Active/Implemented	(9)	Active/Implemented	(17)
Not Implemented	(12)	Not Implemented	(6)

Question 6 -- *Since your institute experience have you been in contact with (a) institute staff; (b) institute consultants; (c) other participants?*

The response data to question 6 suggest two rather clear patterns. One, the participants judged that the institute staff and to a lesser degree the consultants were indeed available to them in post-institute contacts. Two, the participants also indicate that post-institute interactions with other participants were greater than both the institute staff and consultants. This is in fact what one would generally tend to expect. (Undoubtedly the participants in the 1967, 1968 institutes are not so limited by geographical proximity.)

The second part to Question 6, attempted to identify the specific context in which post-institute contacts were made. The responses were varied. A series of representative comments follows:

Institute Staff:

"Help with projects"
"Workshop at UNH"
"Research proposal"
"Feasibility of computerizing spelling program"
"AERA"

Institute Consultants:

"Writing of articles"
"Assisting me on my dissertation"
"AERA"

Other Participants:

"I hired him as my assistant principal"
"I traveled to Rome with one"
"In formulating proposals"
"Exchanged notes"
"Contacted 7 others to see if they had results on their proposals"
"Research information and data on specific projects"
"Conducted evaluation workshops with participants"
"AERA"

		1967	*1968*	*1969*	*1970*	*TOTAL*
Institute Staff	YES	6 (42.9%)	8 (88.9%)	10 (47.6%)	13 (56.5%)	37 (52.2%)
	NO	8 (57.1%)	1 (11.1%)	11 (52.4%)	10 (43.5%)	30 (40.8%)
Institute Consultants	YES	4 (28.6%)	6 (66.7%)	7 (33.3%)	16 (69.6%)	33 (49.3%)
	NO	10 (71.4%)	3 (33.3%)	14 (66.7%)	7 (30.4%)	34 (50.7%)
Other Participants	YES	8 (57.1%)	7 (77.8%)	14 (66.7%)	22 (95.7%)	51 (76.1%)
	NO	6 (42.9%)	2 (22.2%)	7 (33.3%)	1 (4.3%)	16 (23.9%)

Question 7 -- *Since attending the institute have you been called upon to conduct in-service training programs, workshops, or simply give presentations in areas the institute concentrated on?*

The response pattern to Question 7 would suggest that approximately 46% of the participants have rather consistently been asked to provide additional training of an in-service nature. Note that the number of yes responses has steadily increased over the years, from a low of 21% in 1967 to a high of 60% in 1970.

This does seem to reflect a trend on the part of state and local educational agencies to attempt to upgrade the evaluation capabilities of their local staffs. Another related interpretation could be that the steady increases reflect the fact that in all of the four years the trainee was required to receive a recommendation from his or her immediate supervisor before being considered for selection as a participant. As such, levels of expectation in the part of superiors, relative to participant performance tend to increase.

	YES	*NO*	*N/A*
1967	3 (21.4%)	11 (78.6%)	---
1968	3 (33.3%)	5 (55.6%)	1 (11.1%)
1969	11 (52.4%)	9 (42.9%)	1 (4.8%)
1970	14 (60.9%)	9 (39.1%)	---
TOTAL	*31 (46.3%)*	*34 (50.7%)*	*2 (3.0%)*

The second part to Question 7, attempted to identify the specific number, content and audience of such activities. Sample responses are as follows:

"One presentation to the Timberlane School Board."

"20 School Guidance people -- "Colloquium on Innovation and Direction in Guidance in N.H."

"At State Department of Education for 75 members of staff concerning CIPP evaluation model."

"6 sessions behavioral objectives for 10 Department personnel."

"One presentation to Department staff members in PERT and methods of evaluation."

"Three in context evaluation -- State Department employees, Chief State School Officer and assistants, teachers, and administrators."

"Two workshops for Title I, III and IV projects for Directors, and state agency staff."

Question 8 -- *Have you taken or been involved in courses, seminars, workshops, etc., since your institute, related to educational research and/or educational evaluation?*

The response pattern suggests that generally, from a third to a half of the participants sought further training in either seminars or workshops dealing with evaluation and research.

	YES	*NO*
1967	4 (28.6%)	10 (71.4%)
1968	4 (44.4%)	5 (55.6%)
1969	7 (33.3%)	14 (66.7%)
1970	12 (52.2%)	11 (47.8%)
TOTAL	*27 (40.3%)*	*40 (59.7%)*

The second part of Question 8, attempted to identify specific dates, title of seminars and place. A series of sample comments follow:

"Attended week long workshop in Wisc. to study behavioral objectives in reading -- 1969"

"DISP Executive team retreat -- 3 days on accountability -- 1970."

"Research Practicum, Systems Evaluation in Educational Decision-Making -- University of Iowa -- 1970"

"Waco, Texas -- November 1970 -- Professional Growth Program
Waco, Texas -- March 1971 -- Educational Research Project"

"Doctoral Program -- University of Michigan -- 1967-1969"

"Yes -- as components of conferences."

"Multi-variate statistics -- Nova University -- 1971"

"6 hours in research as Ph.D. candidate -- University of Miami -- September 1971"

" Through 1972 -- doctoral studies in evaluation, research and educational development."

"University of North Carolina -- Fall course in Educational Research 1971"

Question 9 -- *What use have you made of the instructional materials presented to you at your institute?*

A representative list of responses follows:

1. They tended to be used as references and particularly to help others learn some of the mysteries of writing proposals.

2. They were used specifically as personal references in more advanced classes taken later in graduate work.

3. Use of the materials in conducting teacher workshops, specific mention was made on the use of PERT and the establishing of behavioral objectives for curriculum revisions that were being planned.

4. The CIPP evaluation model has been commonly discussed in a variety of workshops and teacher evaluation seminars and presentations made to a number of local administrative groups interested in up-grading their evaluation skills.

5. And, of course, for some, the materials have been placed in "permanent files."

Question 10 -- Due to the extensive analysis conducted, Question 10 will be discussed later on in the report.

Question 11 -- *Do you feel that your job function or role has changed as a result of your participating in the Institute?*

The respondents for 1967 and 1968 seem to fall into two quite different categories. In 1967 (14%) and 1968 (33%) saw it as very significant, while for the same years, 50% and 44% saw it as somewhat significant. During the years 1969 and 1970, 65% and 60% respectively, of the respondents saw it as significant or very significant.

This response pattern begins to suggest that with increasing emphasis people who participate in summer research institutes view their activities as more important than they have been viewed in the several previous years.

	Very Significant	*Significant*	*Somewhat Significant*	*Not At All*	*Don't Know*
1967	2 (14.3%)	---	7 (50.0%)	4 (28.6%)	1 (7.1%)
1968	3 (33.3%)	---	4 (44.4%)	1 (11.1%)	1 (11.1%)
1969	4 (19.0%)	10 (47.6%)	6 (28.6%)	1 (4.8%)	---
1970	4 (17.4%)	10 (43.5%)	5 (21.7%)	3 (13.0%)	1 (4.4%)
Total	*13 (19.4%)*	*20 (29.9%)*	*22 (32.8%)*	*9 (13.4%)*	*3 (4.5%)*

Question 12 -- *Would you commit yourself to a number of such Institutes (6-week) to receive an advanced degree such as a Master's in Educational Research and/or Education?*

Approximately 60-65% of the respondents indicated that they would in fact commit themselves to the institute method of earning an advanced degree. Very few of the participants gave a definite no and a significantly large number (approximately 40%), particularly in the years '67, '69 and '70 said maybe.

	Yes	*No*	*Maybe*
1967	6 (42.9%)	2 (14.2%)	6 (42.9%)
1968	6 (66.6%)	2 (22.2%)	1 (11.1%)
1969	11 (52.4%)	2 (9.5%)	8 (38.1%)
1970	10 (43.5%)	6 (26.1%)	7 (30.4%)
Total	*33 (49.3%)*	*12 (17.9%)*	*22 (32.8%)*

Question 13 -- *Participants to Institutes of this type should be grouped by experience, job function and expertise on a more homogeneous, heterogeneous basis or no opinion?*

For the years 1967 and 1968 the participants seemed to be fairly evenly divided between homogeneous and heterogeneous grouping. In 1969 there is a considerable switch in opinion with approximately 43% indicating they favored heterogeneous and only 10% favoring homogeneous grouping. In the 1970 institute it switched back to 65% of the participants indicating they supported homogeneously group participants.

	Homogeneous	*Heterogeneous*	*No Opinion*
1967	5 (35.7%)	6 (42.9%)	3 (21.4%)
1968	4 (44.4%)	3 (33.3%)	2 (22.2%)
1969	2 (9.5%)	9 (42.9%)	10 (14.9%)
1970	15 (65.2%)	6 (26.1%)	2 (8.7%)
Total	*26 (38.8%)*	*24 (35.8%)*	*17 (25.4%)*

Question 14 -- *Do you feel the use of "big name" consultants from large, outstanding universities at these institutes is of extreme value, or something that could be handled by other less well known but comparably trained personnel, of no significant value, or no opinion?*

For 1967 and 1968 the majority of the participants responding felt that it could be handled as effectively by less well known people. Beginning in 1969 there seemed to be a rather marked switch in opinion so that by 1970 a majority of the respondents in fact felt that the use of important consultants from large, outstanding universities was of extreme value.

	Extreme Value	*Handled by Less Well Known*	*No Significant Value*	*No Opinion*
1967	5 (35.7%)	9 (64.3%)	---	---
1968	2 (22.2%)	5 (55.6%)	2 (22.2%)	---
1969	8 (38.1%)	10 (47.6%)	2 (9.5%)	1 (4.8%)
1970	13 (56.5%)	7 (30.4%)	1 (4.4%)	2 (8.7%)
Total	*28 (41.8%)*	*31 (46.3%)*	*5 (7.5%)*	*3 (4.5%)*

Question 15 -- *What are some of the changes you would make assuming you were conducting the Institute?*

This question, along with Questions 16 and 17, do not lend themselves to quantification. Therefore, we shall indicate only a few representative responses:

"More structure"

"Greater emphasis on statistics"

"Lengthen the institute"

"Make computer programming optional"

"Some type of follow-up activities to encourage further interest"

"More emphasis on how to write a proposal"

"More time for individual research and reading"

"More emphasis on 'problem-solving' rather than specialization"

"More participant consultant interaction"

"More careful selection of participants"

"Try to involve the agencies the participants represent"

"More homogeneous grouping"

Question 16 -- *What do you believe the greatest strengths of such an Institute are?*

The general consensus of the responses to this item center around two areas; interaction and professional growth. Numerous participants stated

that they felt the "exchange of information" with fellow participants, BERTS staff and the consultants was of extreme value. The ability to exchange ideas, both formally and informally, with fellow professionals and to solicit assistance from others who may have been more experienced seemed to be overwhelming strengths of the institutes. Second to this was regarded as professional growth, "up dating oneself", the exposure to new materials and the use of real life simulations for problem solving.

Question 17 -- *What do you believe the greatest weaknesses of such institutes are?*

Once again, typical responses seemed to be:

"Too much material in too short a time"

"Too much emphasis on computer program writing"

"Not enough use of planned "team learning"

"Bogging down on course lectures"

"Lack of follow-up"

"The variance of personal backgrounds"

"Too much talk and little action. The 'ivory tower' approach is of very little help"

"Direction"

"Why not have the entire institute work on developing one program/ project in depth"

The statements recurring most frequently seem to be the ones stating that the institute attempted to accomplish too much in too short a period of

time thus giving only superficial attention to the instructional areas and secondly the lack of any type of follow-up such as seminars or workshops to help participants meet real life problems they have trying to implement institute materials or concepts back in the field.

Question 10 -- *Please rate the following Instructional areas, as presented in your Institute, ACCORDING TO THEIR IMPORTANCE: (a) While attending the Institute and (b) to your present job position.*

The response analysis which follows is rather extensive. Part I is based upon an analysis of the responses, for all the participants (total Group), to the thirteen (13) sub-parts to Question 10. The response rates are reported as follows:

(a) Participants were asked to rate on a four point scale -- extremely important, important, minimally important and not important at all -- the value of the instructional areas, as perceived by the participants [During the institute] itself and as viewed from their [present job positions] in the educational profession.

(b) Response patterns are reported in percentages.

(c) A brief commentary on the response patterns is made for each sub-part (10A-10M) and associated data tables (10A-10M) immediately follows.

PART I

TOTAL GROUP RESPONSES BY PERCENTAGES -- VALUE OF INSTRUCTIONAL AREAS AS PERCEIVED DURING THE INSTITUTE AND FROM THEIR PRESENT JOB POSITIONS

Question 10A -- *Developing and writing behavioral objectives.* [During the institute], 78% of the respondents viewed this instructional area as important to extremely important. From their [present positions], 72% of the respondents still viewed the instructional area as important to extremely important.

Question 10 B -- *The construction and identification of learning hierarchies.* [During the institute], in excess of 60% of the participants viewed this instructional area as important to extremely important. From their [present positions], approximately 40% felt the instructional area was important to extremely important. The response pattern would seem to indicate a fair degree of ambivalence towards the importance of this instructional area.

TABLE 10 A

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	8-57.2%	1-7.1%	--	3-21.4%
1968	1-11.1%	6-66.7%	1-11.1%	--	1-11.1%
1969	8-38.0%	11-52.4%	--	1-4.8%	1-4.8%
1970	5-21.7%	12-52.2%	3-13.0%	2-8.7%	1-4.4%
TOTAL	16-23.9%	37-55.2%	5-7.5%	3-4.4%	6-9.0%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	5-35.8%	1-7.1%	1-7.1%	4-28.6%
1968	3-33.3%	3-33.3%	2-22.3%	--	1-11.1%
1969	8-38.0%	9-42.9%	1-4.8%	2-9.5%	1-4.8%
1970	8-34.9%	10-43.5%	3-13.0%	1-4.3%	1-4.3%
TOTAL	22-32.8%	27-40.4%	7-10.4%	4-6.0%	7-10.4%

****

TABLE 10 B

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	9-64.3%	2-14.3%	--	3-21.4%
1968	1-11.1%	4-44.4%	1-11.1%	1-11.1%	2-22.3%
1969	3-14.3%	11-52.4%	5-23.8%	1-4.8%	1-4.7%
1970	3-13.0%	11-47.8%	8-34.9%	1-4.3%	--
TOTAL	7-10.4%	35-52.2%	16-23.9%	3-4.5%	6-9.0%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	6-42.9%	1-7.1%	2-14.3%	4-28.6%
1968	1-11.1%	1-11.1%	3-33.4%	2-22.2%	2-22.2%
1969	--	8-38.1%	9-42.9%	3-14.3%	1-4.7%
1970	3-13.0%	6-26.1%	10-43.5%	3-13.0%	1-4.4%
TOTAL	5-7.5%	21-31.3%	23-34.3%	10-14.9%	8-12.0%

Question 10C -- *Understanding the various administrative approaches to program, project management.* [During the institute], 80% of the participants viewed this instructional area as important to extremely important. It is interesting to note that in 1968, only 55% of the participants viewed the instruction as important to extremely important. On the other hand, 95% of the participants in the 1970 institute saw it as important to extremely important. From their [present position], 70% of the participants still viewed this instructional area as important to extremely important.

Question 10D -- *The skills acquired in utilizing the program evaluation review technique (PERT).* [During the institute], approximately 60% of the participants indicated the instructional area was important to extremely important. The remainder viewed it as minimally important and 3% viewed it as not important. From their [present position], approximately 48% of the participants viewed the use of PERT as important to extremely important. Approximately 40% saw it as being minimally important to important.

TABLE 10 C

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	8-57.1%	2-14.3%	--	2-14.3%
1968	3-33.3%	2-22.2%	2-22.2%	--	2-22.3%
1969	5-23.8%	12-57.1%	3-14.3%	--	1-4.8%
1970	7-30.4%	15-65.2%	1-4.4%	--	--
TOTAL	17-25.4%	37-55.2%	8-11.9%	--	5-7.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	4-28.6%	4-28.6%	2-14.3%	1-7.1%	3-21.4%
1968	2-22.2%	2-22.2%	1-11.1%	2-22.2%	2-22.3%
1969	4-19.0%	11-52.4%	4-19.0%	1-4.8%	1-4.8%
1970	10-43.5%	11-47.8%	2-8.7%	--	--
TOTAL	20-29.9%	28-41.8%	9-13.4%	4-6.0%	6-8.9%

********** **********

TABLE 10 D

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	7-50.0%	1-7.1%	--	5-35.8%
1968	3-33.3%	3-33.3%	2-22.3%	--	1-11.1%
1969	2-9.5%	11-52.4%	5-23.8%	1-4.8%	2-9.5%
1970	8-34.8%	9-39.1%	5-21.7%	1-4.4%	--
TOTAL	14-20 9%	30-44.8%	13-19.4%	2-3.0%	8-11.9%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	3-21.4%	3-21.4%	1-7.1%	6-43.0%
1968	2-22.2%	2-22.2%	4-44.4%	--	1-11.2%
1969	4-19.0%	4-19.0%	8-38.1%	3-14.3%	2-9.6%
1970	4-17.4%	12-52.2%	7-30.4%	--	--
TOTAL	11-16.4%	21-31.3%	22-32.8%	4-6.0%	9-13.4%

Question 10E -- *The CIPP Model of Evaluation (Context, Input, Process and Product).*

[During the institute], the response pattern indicates that the first two years, participants were not really exposed to CIPP since it was just in its formative stages. For most of the responses, their knowledge relative to CIPP was acquired through contacts with other participants, the BERTS staff, and attending conferences. In general, approximately 60% marked it as important to minimally important. The picture seems to change very markedly by 1970 however, when almost 90% of the participants viewed the instruction as important to extremely important. From their [present position], the response pattern is similar. The participants in earlier institutes had not been exposed to CIPP. The entire 1970 group of respondents viewed CIPP as important to extremely important.

Question 10F -- *The skills and practice acquired by writing computer programs.*

[During the institute], the response pattern is quite interesting since it seems to indicate that over the years the ability to write computer programs has become less valuable. This perhaps reflects the increasing number of computer programmers that are available to professional educators thereby lessening the need for the personal skill at writing computer programs. The participant responses range from a high of 56% in 1967 to a low of 21% in 1970 who viewed the instruction as important to extremely important. From their [present position], a similar response pattern is noted but even more pronounced. The participants seem to be saying that busy school people do not have the time to in fact write their own computer programs.

This phenomenon had been observed by the institute staff over the years and appropriate instructional modifications have taken place. For instance, in the 1970 program, computer programming was made optional to the participants. Seemingly, the emerging shift is towards the use of terminal devices which school administrators can use with much less comprehensive knowledge of the abilities of writing computer programs.

TABLE 10 E

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	5-35.7%	3-21.4%	--	6-42.9%
1968	1-11.1%	5-55.6%	2-22.2%	--	1-11.1%
1969	2-9.5%	12-57.2%	5-23.8%	--	2-9.5%
1970	9-39.2%	13-56.5%	--	1-4.3%	--
TOTAL	12-17.9%	35-52.2%	10-14.9%	1-1.5%	9-13.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	2-14.3%	5-35.7%	1-7.1%	6-42.9%
1968	1-11.1%	2-22.2%	3-33.4%	2-22.2%	1-11.1%
1969	5-23.8%	7-33.3%	3-14.3%	3-14.3%	3-14.3%
1970	11-47.8%	12-52.2%	--	--	--
TOTAL	17-25.4%	23-34.3%	11-16.4%	6-9.0%	10-14.9%

****

TABLE 10 F

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	6-42.9%	4-28.6%	2-14.2%	--
1968	4-44.4%	1-11.1%	2-22.2%	2-22.3%	--
1969	2-9.5%	10-47.6%	7-33.3%	--	2-9.6%
1970	1-4.3%	4-17.4%	3-13.0%	3-13.0%	12-52.3%
TOTAL	9-13.4%	21-31.3%	16-23.0%	7-10.4%	14-21.0%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	3-21.4%	4-28.6%	5-35.7%	1-7.2%
1968	2-22.2%	3-33.3%	2-22.2%	2-22.3%	--
1969	1-4.8%	6-28.6%	6-28.6%	6-28.6%	2-9.4%
1970	2-8.7%	2-8.7%	5-21.7%	2-8.7%	12-52.2%
TOTAL	6-9.0%	14-20.9%	17-25.4%	15-22.4%	15-22.3%

Question 10G -- *The skills and practices acquired in operating computers and computer supported hardware.* [During the institute], in excess of 60% of the institute participants saw this area as minimally important to important. From their [present position], approximately 50% of the participants judge it to be minimally important to important to have these skills in their present position. Again, perhaps reflecting the same reasoning as discussed in Question 10F.

Question 10H -- *The statistical skills offered as an introductory base or general review of those needed in research.* [During the institute], for the first two years some 70-80% of the participants saw this as an important to extremely important skill. In 1969, 75% of the participants saw it as minimally important to important and in 1970, only approximately 40% saw it as important, minimally important, or extremely important. In their [present position], the response pattern is quite similar. Again this skill is perceived by the participants over the four year period as becoming less important. This would seem to be a similar finding to the response noted for 10F on computer skills where the participants are seeing perhaps the need to have consultants or highly trained people capable and available to them but not to acquire and master the skills themselves.

TABLE 10 G

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	6-42.9%	5-35.7%	1-7.1%	1-7.1%
1968	2-22.2%	3-33.3%	3-33.3%	1-11.2%	--
1969	--	7-33.3%	10-47.6%	2-9.5%	2-9.6%
1970	--	2-8.7%	5-21.7%	4-17.4%	12-52.2%
TOTAL	3-4.5%	18-26.9%	23-34.3%	8-12.0%	15-22.3%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	4-28.6%	4-28.6%	5-35.7%	1-7.1%
1968	2-22.2%	4-44.4%	2-22.2%	1-11.2%	--
1969	--	6-28.6%	7-33.3%	6-28.6%	2-9.5%
1970	--	2-8.7%	4-17.4%	4-17.4%	13-56.5%
TOTAL	2-3.0%	16-23.9%	17-25.3%	16-23.9%	16-23.9%

****

TABLE 10 H

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	5-35.7%	8-57.1%	1-7.2%	--	--
1968	4-44.4%	3-33.3%	2-22.3%	--	--
1969	2-9.5%	11-52.4%	5-23.8%	1-4.8%	2-9.5%
1970	2-8.7%	6-26.1%	2-8.7%	4-17.4%	9-39.1%
TOTAL	13-19.4%	28-41.8%	10-14.9%	5-7.5%	11-16.4%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	9-64.3%	--	1-7.1%	1-7.2%
1968	3-33.3%	2-22.2%	4-44.5%	--	--
1969	3-14.3%	9-42.9%	6-28.6%	1-4.8%	2-9.4%
1970	4-17.4%	6-26.1%	2-8.7%	1-4.3%	10-43.5%
TOTAL	13-19.4%	26-38.8%	12-17.9%	3-4.5%	13-19.4%

Question 10I -- *Knowledge gained from interaction with fellow participants.*

[During the institute], from 70-80% of the respondents indicated that this was important to extremely important. This would argue cogently for future institutes providing adequate amounts of time for participant interaction (e.g., team learning). From their [present position], the response pattern seems to be similar. The general ratings being from 60-70% viewing it as important to extremely important.

Question 10J -- *Knowledge gained from interaction with BERTS staff. (exclusive of outside consultants)*

[During the institute], approximately 85% of the participants rated this as important to extremely important. From their [present position], approximately 60% of the participants viewed interaction with the BERTS staff as important to extremely important.

TABLE 10 I

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	6-42.9%	7-50.0%	1-7.1%	-	--
1968	2-22.2%	5-55.6%	2-22.2%	-	--
1969	15-71.4%	5-23.8%	--	--	1-4.8%
1970	10-43.5%	8-34.8%	5-21.7%	--	--
TOTAL	33-49.3%	25-37.3%	8-11.9%	--	1-1.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	4-28.6%	8-57.1%	1-7.1%	--	1-7.2%
1968	2-22.2%	2-22.2%	3-33.4%	2-22.2%	--
1969	14-66.7%	5-23.8%	1-4.8%	--	1-4.7%
1970	9-39.1%	9-39.1%	5-21.8%	--	--
TOTAL	29-43.3%	24-35.8%	10-14.9%	2-3.0%	2-3.0%

****

TABLE 10 J

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	4-28.6%	9-64.3%	1-7.1%	--	--
1968	4-44.4%	4-44.5%	--	--	1-11.1%
1969	9-42.9%	11-52.4%	--	--	1-4.7%
1970	8-34.8%	8-34.8%	4-17.4%	3-13.0%	--
TOTAL	25-37.3%	32-47.8%	5-7.5%	3-4.5%	2-2.9%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	9-64.3%	--	1-7.1%	2-14.3%
1968	3-33.3%	2-22.2%	4-44.5%	--	--
1969	7-33.3%	7-33.3%	5-23.8%	1-4.8%	1-4.8%
1970	8-34.8%	6-26.1%	6-26.1%	3-13.0%	--
TOTAL	20-29.9%	24-35.8%	15-22.4%	5-7.5%	3-4.4%

Question 10K -- *Knowledge gained from interaction with Institute consultants outside of the classroom.* [During the institute], for the years 1967 and 1968 approximately 70% of the institute participants saw this as being minimally important to important. During the 1969 and 1970 summer institutes approximately 70-75% of the trainees saw this as being important to extremely important. From their [present position], for the years '67 and '68 this was viewed as minimally important to important by 40-45% of the participants. During the '69 - '70 institute it was viewed as important to extremely important by approximately 60-70% of the participants. This is viewed as a very positive outcome. The desirability of personal contacts provided by the institute in terms of continued interaction between the participants, the Bureau staff members, and the consultants seems to be happening with a rather considerable amount of success, particularly as a result of the last two institutes.

Question 10L -- *Knowledge of proposal writing skills acquired.* [During the institute], approximately 70-75% of the trainees viewed this as an important to extremely important skill to be acquired during their stay at the institute. From their [present position], during the years '67 and '68 approximately 60% of the participants saw this as important to extremely important ability in their present jobs. This percentage has moved up rather sharply in years '69 and '70 where it now approaches 75-80% of the response mode. Again indicating that school systems are moving, at least with these participants, in the area of educational grantmanship.

TABLE 10 K

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	1-7.1%	7-50.0%	3-21.4%	2-14.3%	1-7.2%
1968	--	4-44.4%	3-33.3%	1-11.1%	1-11.2%
1969	3-14.3%	13-69.0%	3-14.3%	1-4.8%	1-4.8%
1970	6-26.1%	12-52.2%	3-13.0%	1-4.4%	1-4.4%
TOTAL	10-14.9%	36-53.7%	12-17.9%	5-7.5%	4-6.0%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	--	6-42.9%	3-21.4%	2-14.3%	3-21.4%
1968	1-11.1%	--	4-44.5%	4-44.4%	--
1969	2-9.5%	11-52.4%	3-14.3%	4-19.0%	1-4.8%
1970	8-34.8%	9-39.1%	4-17.4%	1-4.4%	1-4.4%
TOTAL	11-16.4%	26-38.8%	14-20.9%	11-16.4%	5-7.5%

****

TABLE 10 L

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	11-78.6%	--	--	--
1968	5-55.6%	2-22.2%	1-11.1%	1-11.1%	--
1969	6-28.6%	12-57.1%	1-4.8%	1-4.8%	1-4.8%
1970	9-39.1%	9-39.1%	4-17.4%	1-4.4%	--
TOTAL	23-34.3%	34-50.7%	6-9.0%	3-4.5%	1-1.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	6-42.9%	3-21.4%	1-7.1%	1-7.1%
1968	2-22.2%	4-44.4%	3-33.3%	--	--
1969	9-42.9%	7-33.3%	3-14.3%	1-4.8%	1-4.8%
1970	12-52.2%	9-39.1%	1-4.4%	1-4.4%	--
TOTAL	26-38.8%	26-38.8%	10-14.9%	3-4.5%	2-3.0%

Question 10M -- *Importance of readings in required texts as well as outside sources.*

[During the institute], rather consistently 70-80% of the participants viewed this as being minimally important to important. There is, however, some pattern of an increasing perception of this activity as being extremely important in later institutes, '69 and '70. From their [present position], the response pattern here is similar. Approximately 70-80% of the participants in their present positions view this as minimally important to important.

TABLE 10 M

During the Institute

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	3-21.4%	7-50.0%	4-28.6%	--	--
1968	1-11.1%	5-55.5%	3-33.3%	--	--
1969	7-33.3%	9-42.9%	4-19.0%	--	1-4.8%
1970	4-17.4%	11-47.8%	7-30.4%	1-4.4%	--
TOTAL	15-22.4%	32-47.8%	18-26.9%	1-1.5%	1-1.5%

Present Position

	Extremely Important	Important	Minimally Important	Not Important	No Opinion
1967	2-14.3%	7-50.0%	4-28.6%	--	1-7.1%
1968	--	5-55.6%	4-44.4%	--	--
1969	7-33.3%	7-33.3%	5-23.8%	1-4.8%	1-4.8%
1970	3-13.0%	12-52.2%	6-26.1%	2-8.7%	--
TOTAL	12-17.9%	31-46.3%	19-28.4%	3-4.5%	2-3.0%

****

PART II

PARTICIPANTS RESPONSES GROUPED BY PROFESSIONAL ROLES VALUE OF INSTRUCTIONAL AREA AS PERCEIVED DURING THE INSTITUTE AND FROM THEIR PRESENT JOB POSITIONS

In order to gain further insights from past participants as to the value of the instructional areas as viewed [during the institute] and from their [present job positions], participant responses to Question 10 were grouped by professional roles. That is, by Teachers, School Administrators, State Department of Education Personnel, and Research/College Personnel. The reader is now referred to Table B -- Participants Responses by Professional Roles in Appendix C of this section of the report.

The data from Table B was then condensed* in a two by two matrix and subjected to a statistical analysis using Chi-square testing for the goodness of fit of the two respondent modes. Because the cell frequencies were small, the Yates Correction for Continuity Factor was applied.

The purpose for grouping the participant responses by professional roles was primarily to determine whether any significant shifts had occurred by professional roles relative to the importance of the instructional areas, both during and after the institute. Additionally, the resultant data could also be utilized in planning for future institutes, to determine the adequacy of research and/or evaluation training programs geared specifically to selected roles within the educational profession.

*The four point rating scale for Question 10 was condensed as follows: extremely important and important to *important*; minimally important and not important to *not important*.

For the sake of simplicity, illustrations are presented below describing the comparisons which were performed.

TABLE I

TOTAL GROUP

	IMPORTANT	NOT IMPORTANT	TOTAL
DURING			
AFTER			
TOTAL			

TABLE II

SCHOOL VS. OTHERS - DURING

	IMPORTANT	NOT IMPORTANT	TOTAL
SCHOOL			
OTHERS			
TOTAL			

NOTE: School refers to "teachers" and "school administrators." Others refers to "State Department of Educational Personnel" and "Research/College personnel."

TABLE III

SCHOOL VS. OTHERS - AFTER

	IMPORTANT	NOT IMPORTANT	TOTAL
SCHOOL			
OTHERS			
TOTAL			

TABLE IV

TEACHERS AND SCHOOL ADMINISTRATORS DURING AND AFTER

	IMPORTANT	NOT IMPORTANT	TOTAL
ADMINISTRATORS & TEACHERS-DURING			
ADMINISTRATORS & TEACHERS-AFTER			
TOTAL			

TABLE V

STATE DEPARTMENT OF EDUCATION PERSONNEL AND COLLEGE/RESEARCH PERSONNEL

DURING AND AFTER

	IMPORTANT	NOT IMPORTANT	TOTAL
STATE DEPT. & COL/RES --DURING			
STATE DEPT. & COL/RES --AFTER			
TOTAL			

The results of the Chi-square analysis for each of the comparisons made are discussed below:

TABLE I: Of the thirteen Chi-squares reported, significant differences were recorded in three areas; Question 10B -- *the construction and identification of learning hierarchies;* Question 10D -- *the skill acquired in utilizing the Program Evaluation Review Technique (PERT);* and Question 10J -- *Knowledge gained from interaction with BERTS staff (exclusive of consultants).*

Commentary:

10B- For the total group the shift was from important [during the institute] to not important from their [present job positions]. One possible interpretation for this significant change is that a large number of participants are not in formal instructional roles, thereby diminishing the utility of learning hierarchies.

10D- For the total group the shift was from important [during the institute] to not important from their [present job positions]. Perhaps one explanation for the significant change is that PERT is a highly sophisticated tool for management, and a majority of the participants were not in positions where they could employ such a technique.

10J- For the total group, the shift was from important [during the institute] to not important from their [present job positions]. One possible explanation we can offer is that during the institute, the BERTS staff serve, in a sense, the role of middle men between the consultants and the participants. This role has taken the form of providing information between the participants and consultants relative to goals of the institute and related instructional segments, relating to various levels of expectatains for both groups, etc. Another interpretation could be that for the four years the BERTS staff has been primarily responsible for instruction in statistics and computer programming. In Part I -- responses to Questions 10F, G, H indicated that participants find these areas less important in their present job positions than during the institute. As such, this would seem to account for the shift in opinion relative to the knowledge gained from the BERTS staff.

TABLE I

TOTAL GROUP QUESTION 10-A

53	8	61	Not Significant
49	11	60	
102	19	121	

CHI SQUARE= 0.29

TOTAL GROUP QUESTION 10-B

42	19	61	Significant at .02
26	33	59	
68	52	120	

CHI SQUARE= 6.53

TOTAL GROUP QUESTION 10-C

54	8	62	Not Significant
48	13	61	
102	21	123	

CHI SQUARE= 1.00

TOTAL GROUP QUESTION 10-D

44	15	59	Significant At .05
32	26	58	
76	41	117	

CHI SQUARE= 4.02

TOTAL GROUP QUESTION 10-E

47	11	58	Not Significant
40	17	57	
87	28	115	

CHI SQUARE= 1.30

TOTAL GROUP QUESTION 10-F

30	23	53	Not Significant
20	32	52	
50	55	105	

CHI SQUARE= 2.77

TOTAL GROUP QUESTION 10-G

21	31	52	Not Significant
18	33	51	
39	64	103	

CHI SQUARE= 0.11

TOTAL GROUP QUESTION 10-H

41	15	56	Not Significant
39	15	54	
80	30	110	

CHI SQUARE= 0.01

TOTAL GROUP QUESTION 10-I

58	8	66	Not Significant
53	12	65	
111	20	131	

CHI SQUARE= 0.59

TOTAL GROUP QUESTION 10-J

57	8	65	Significant At .02
44	20	64	
101	28	129	

CHI SQUARE= 5.74

TOTAL GROUP QUESTION 10-K

46	17	63	Not Significant
37	25	62	
83	42	125	

CHI SQUARE= 1.93

TOTAL GROUP QUESTION 10-L

57	9	66	Not Significant
52	13	65	
109	22	131	

CHI SQUARE= 0.55

TOTAL GROUP QUESTION 10-M

47	19	66	Not Significant
43	22	65	
90	41	131	

CHI SQUARE= 0.19

TABLE II: Of the thirteen Chi-squares reported, a significant difference was recorded in one area: Question 10J - *knowledge gained from interaction with BERTS staff (exclusive of consultants).*

Commentary:

10J- For school personnel vs. non-school personnel [during the institute], the non-school personnel viewed 10J as not important. This is to be expected. Over the four years the participants within this category had attained a reasonable level of awareness of the instructional content prior to attending the institute. The school personnel, however, viewed Question 10J as important during the institute.

TABLE III: Of the thirteen Chi-squares reported, significant differences were recorded in two (2) areas: Question 10E -- *the CIPP model of Evaluation (Context, Input, Process & Product);* and Question 10J -- *Knowledge gained from interaction with BERTS staff (exclusive of consultants).*

Commentary:

10E- For school personnel vs. non-school personnel [after the institute], non-school personnel viewed 10E as important. This significant change could perhaps be attributed to the fact that non-school personnel have had more opportunity to employ the concepts of CIPP.

10J- The pattern is similar to Table II, and we offer the same interpretation with one additional interpretation. One of the Bureau's major functions is to provide various services to school personnel throughout New England. As such, the Bureau remains in constant contact with school personnel. This could perhaps account for school personnel considering Question 10J important.

TABLE II

DURING H.E.W. SUMMER INSTITUTE

SCHOOL VS. OTHERS — QUESTION 10-A

30	4	34
22	5	27
52	9	61

CHI SQUARE= 0.14

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-B

24	9	33
19	9	28
43	18	61

CHI SQUARE= 0.02

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-C

28	5	33
26	3	29
54	8	62

CHI SQUARE= 0.03

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-D

25	7	32
19	8	27
44	15	59

CHI SQUARE= 0.15

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-E

22	9	31
24	2	26
46	11	57

CHI SQUARE= 2.88

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-F

22	13	35
8	9	17
30	22	52

CHI SQUARE= 0.61

Not Significant

TABLE III

AFTER H.E.W. SUMMER INSTITUTE

SCHOOL VS. OTHERS — QUESTION 10-A

30	4	34
19	7	26
49	11	60

CHI SQUARE= 1.36

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-B

18	15	33
9	17	26
27	32	59

CHI SQUARE= 1.59

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-C

24	9	33
22	6	28
46	15	61

CHI SQUARE= 0.05

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-D

16	16	32
15	11	26
31	27	58

CHI SQUARE= 0.10

Not Significant

SCHOOL VS. OTHERS — QUESTION 10-E

17	14	31
24	3	27
41	17	58

CHI SQUARE= 6.52

Significant At .02

SCHOOL VS. OTHERS — QUESTION 10-F

15	21	36
8	9	17
23	30	53

CHI SQUARE= 0.01

Not Significant

DURING H.E.W. SUMMER INSTITUTE

SCHOOL VS. OTHERS — QUESTION 10-G

16	19	35
5	12	17
21	31	52

Not Significant

CHI SQUARE= 0.68

SCHOOL VS. OTHERS — QUESTION 10-H

29	7	36
11	9	20
40	16	56

Not Significant

CHI SQUARE= 2.96

SCHOOL VS. OTHERS — QUESTION 10-I

34	3	37
23	6	29
57	9	66

Not Significant

CHI SQUARE= 1.25

SCHOOL VS. OTHERS — QUESTION 10-J

35	1	36
19	10	29
54	11	65

Significant At .01

CHI SQUARE= 9.34

SCHOOL VS. OTHERS — QUESTION 10-K

25	9	34
22	7	29
47	16	63

Not Significant

CHI SQUARE= 0.01

SCHOOL VS. OTHERS — QUESTION 10-L

33	3	36
23	7	30
56	10	66

Not Significant

CHI SQUARE= 1.82

SCHOOL VS. OTHERS — QUESTION 10-M

27	10	37
20	9	29
47	19	66

Not Significant

CHI SQUARE= 0.01

AFTER H.E.W. SUMMER INSTITUTE

SCHOOL VS. OTHERS — QUESTION 10-G

12	22	34
5	13	18
17	35	52

Not Significant

CHI SQUARE= 0.06

SCHOOL VS. OTHERS — QUESTION 10-H

28	8	36
14	5	19
42	13	55

Not Significant

CHI SQUARE= 0.00

SCHOOL VS. OTHERS — QUESTION 10-I

32	5	37
21	7	28
53	12	65

Not Significant

CHI SQUARE= 0.74

SCHOOL VS. OTHERS — QUESTION 10-J

29	7	36
13	15	28
42	22	64

Significant At .01

CHI SQUARE= 6.69

SCHOOL VS. OTHERS — QUESTION 10-K

18	17	35
18	9	27
36	26	62

Not Significant

CHI SQUARE= 0.90

SCHOOL VS. OTHERS — QUESTION 10-L

30	7	37
21	7	28
51	14	65

Not Significant

CHI SQUARE= 0.08

SCHOOL VS. OTHERS — QUESTION 10-M

26	11	37
17	11	28
43	22	65

Not Significant

CHI SQUARE= 0.29

TABLE IV: Of the thirteen Chi-squares reported, a significant difference was recorded in the area: Question 10D - *the skill acquired in utilizing the Program Evaluation Review Technique (PERT).*

Commentary:

10D- For teachers and school administrators, the shift was from important [during the institute] to not important [after the institute]. This seems to support what the total group felt as reported in Table I. That is, teachers and administrators view as less important the PERT technique in their present job positions.

TABLE V: Of the thirteen Chi-squares reported, one significant difference was recorded - Question 10B - *the construction and identification of learning hierarchies.*

Commentary:

For state department personnel and college/research personnel, the shift was from important [during the institute] to not important [after the institute]. Again, this seems to support the total group felt as reported in Table I.

TABLE IV

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-A

30	4	34
30	4	34
60	8	68

Not Significant

CHI SQUARE= 0.14

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-B

24	9	33
18	15	33
42	24	66

Not Significant

CHI SQUARE= 1.64

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-C

28	5	33
24	9	33
52	14	66

Not Significant

CHI SQUARE= 0.82

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-D

25	7	32
16	16	32
41	23	64

Significant at .05

CHI SQUARE= 4.34

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-E

22	9	31
17	14	31
39	23	62

Not Significant

CHI SQUARE= 1.11

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION

22	13	35
15	21	36
37	34	71

Not Significant

CHI SQUARE= 2.40

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTIC

11	9	20
14	5	19
25	14	39

Not Significant

CHI SQUARE= 0.78

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-I

23	6	29
21	7	28
44	13	57

Not Significant

CHI SQUARE= 0.01

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-J

19	10	29
13	15	28
32	25	57

Not Significant

CHI SQUARE= 1.40

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTIC 1

22	7	29
18	9	27
40	16	56

Not Significant

CHI SQUARE= 0.22

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-L

23	7	30
21	7	28
44	14	58

Not Significant

CHI SQUARE= 0.03

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-M

20	9	29
17	11	28
37	20	57

Not Significant

CHI SQUARE= 0.14

TABLE V

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-A

22	5	27
19	7	26
41	12	53

Not Significant

CHI SQUARE= 0.16

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-B

19	9	28
9	17	26
28	26	54

Significant at .05

CHI SQUARE= 4.71

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-C

26	3	29
22	6	28
48	9	57

Not Significant

CHI SQUARE= 0.61

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-D

19	8	27
15	11	26
34	19	53

Not Significant

CHI SQUARE= 0.46

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-E

24	2	26
24	3	27
48	5	53

Not Significant

CHI SQUARE= 0.00

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-F

8	9	17
8	9	17
16	18	34

Not Significant

CHI SQUARE= 0.12

STATE DEPARTMENT AND COL./RES. DURING AND AFTER QUESTION 10-G

5	12	17
5	13	18
10	25	35

Not Significant

CHI SQUARE= 0.07

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-G

16	19	35
12	22	34
28	41	69

Not Significant

CHI SQUARE= 0.40

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-H

29	7	36
28	8	36
57	15	72

Not Significant

CHI SQUARE= 0.00

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-I

34	3	37
32	5	37
66	8	74

Not Significant

CHI SQUARE= 0.14

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-J

35	1	36
29	7	36
64	8	72

Not Significant

CHI SQUARE= 3.52

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-K

25	9	34
18	17	35
43	26	69

Not Significant

CHI SQUARE= 2.71

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-L

33	3	36
30	7	37
63	10	73

Not Significant

CHI SQUARE= 0.95

TEACHERS AND ADMINISTRATORS DURING AND AFTER QUESTION 10-M

27	10	37
26	11	37
53	21	74

Not Significant

CHI SQUARE= 0.00

EVALUATION OF THE INSTRUCTIONAL EFFECTIVENESS OF THE 1967 to 1970 SUMMER RESEARCH TRAINING INSTITUTES CONDUCTED AT THE UNIVERSITY OF NEW HAMPSHIRE

SECTION II

RESULTS OF ON-SITE EVALUATION

Rationale for Site Visits

The second major evaluative effort focused on an on-site evaluation conducted principally by Mr. Charles Williamson, Jr., a participant-observer in the 1970 institute, who served as a field evaluator. The on-site visits were conducted in the South and were focused primarily on a number of the 1970 institute participants.

The rationale for conducting the on-site follow-up evaluation was stated as follows:

- Will enhance the "expertise" of the participants
- Will establish a degree of rapport between the 1970 participant, the Institute personnel, and the LEA
- It also involves the LEA directly with the Institute personnel
  - LEA personnel and participants will be able to give a candid, yet valuable evaluation of the program, which in turn could be an indication of the affectiveness of the Institute upon the immediate needs of the agency. (i.e. promotions, contributions, of participants, etc.).
  - Information could be obtained by the Institute staff for OE as to the direction of future institutes.
  - LEA's, participants and future participants will feel a part of power structure and will be willing to assist more extensively.

Approach to the On-Site Visits

Questionnaires were sent by the field evaluators to ten participants and their immediate supervisors. The field evaluator then followed-up by telephone calls to the participants and their supervisors, requesting permission for a personal interview. All participants and supervisors honored the request and time and locations were agreed upon.

The on-site visits were conducted from April 9, 1971 to April 16, 1971. A travel summary is presented below:

TRAVEL SUMMARY

April 9, 1971	(D) Athens, Georgia
April 8, 1971	(D) Thomson, Ga.
April 2, 1971	(A) Mound Bayou, Miss.
April 1, 1971	(A) Clinton, Miss.
April 7, 1971	(D) Knoxville, Tenn.
April 7, 1971	(D) Chattanooga, Tenn.
April 14, 1971	(A) New Orleans, La.
April 15, 1971	(A) Grambling, La.
April 16, 1971	(A) Waco, Texas

Interview Results -- Participants & Supervisors

The following section represents results of the on-site evaluation as reported to us by the field-evaluator. Copies of the interview schedules for the participants and supervisors are included at the conclusion of this report.

INTERVIEW RESULTS

Participants

Part I

	Professional	Personal
1.	9	8

There was no difference in the responses of the participants as to the reason for their attendance to the Institute. It was readily recognized that the person had the chance to attend the program and he took advantage of the opportunity. The average response was geared toward their personal reason as being their professional reason. The personal reason in most cases was associated with their professional reason.

2. a. Release 0

   b. Transportation 3

   c. Finances 8

Release was not a problem because most of the people were not employed during the summer.

Transportation was a problem for three of the participants; because of their mode of transportation, airline schedules difficult to meet and their living a considerable distance from the airport.

Finance was important to the individuals because most of these persons had to readjust their lives to the stipend. However, the participants were reimbursed for their travel expenses, the major problem was centered around the money earned during the

Institute. This amount was not enough to meet the needs of the families at home.

3.	High Expectations	For the Record	Not important
Employer	2	6	1
Yourself	8	1	0
Family	9	0	0

4.	
Behavioral objectives	3
Learning Heirarchies	2
Program/Project Management	1
PERT	4
CIPP	3
Computer Programs	
Research Techniques	1
Social Interaction	
Proposal Writing Skills	5

5.	
Excellent	0
Very Good	2
Good	3
Fair	3
Poor	0
*Not important	2

These persons lived in a black community. Their schools are not involved in the problems.

The supporting response was always "The school integration program is not what it should be".

6.	Problem for black teachers	3
	Equally competitive	2
	No problem	0
	Not applicable	3
7.	Favorable	5
	Unfavorable	1
	Indifferent	3

8.

	Blacks		Whites	
	Southern	Northern	Southern	Northern
Job	8		8	
For supervision	2		3	
Under supervision	4		4	
Social Interaction	8	8	8	8
Professional Activities	9	6	9	7

9.

Direct Decision	Indirect Decision	N/A
2	6	1

Most of the decisions are made through the supervisor. Though there are two individuals who make decisions directly, they also attempt to influence their supervisor and make decisions for their supordinates.

All of the participants indicated that their decisions are usually accepted.

10. See Item 1.

All of the participants felt that the program was helpful to them.

11. All of the respondents indicated that their supervisors felt that the program was helpful for their personnel.

12.

Promotion	Demotion	No change
2	1	6

13. All persons would be happy to attend the program again. For more or less time.

14. All responses was yes.

15.

Written	Directed Project	N/A
4	1	1

Other participants (workshop, etc.)

a. Federal 1

b. State 2

c. Local 6

16.

Useful	Not useful	N/A
8	0	1

17.

Share Experience	Not share experience
4	5

All of the participants shared their experiences with others through conversations, etc.

Part II

1. The average time for writing the proposals was four (4) weeks. Other job committments cause most of the persons the delay in returning their proposals to U.N.H.

2.

Implemented	0
Financed	1
Accepted in your area	4
Negotiating	2
Proposal incomplete	2

3.

Difficulty	No difficulty	N/Resp.
7	0	2

4.

Accepting	Rejecting	N/R
6	1	2

5.

Educational innovation	2
Projected ideas (new/revised)	3
Community concern	2
Educational concern	1
N/Response	1

6.

Financing	7
Completing	2

7. See Item 4.

8. Institute staff 6

   Participants 5

   Consultants 0

   Other 2

9. All response:

   Assistance in funding

10. Indicated in Narrative Report.

SUPERVISORS RESPONSES

1. All responses were excellent (8)
2. Same as above (8)
3. yes (6) no (2)
4. Helpful (8)
5. yes (8)

   The average response - 3 years

6. yes 8 responses
7. yes (5) no (3)
8. yes (8)

   All of the promotion depended on the opening. Only two supervisors indicated a specific job. They were promotions to supervisors.

9. Supervisor 1

   Principal 1

   Asst. Principal 1

   Promotion w/o change of job or category 3

INTERVIEW SCHEDULE

Participant

Part I

1. People attend Institutes for a variety of reasons:
   (a.) What was your professional reason(s) ?
   (b.) What was your major personal reason(s) ?

2. What problem situations did you encounter:
   (a.) Release
   (b) Transportation
   (c.) Finances

3. What was expected of you after your return from the Institute:
   (a.) from your employer
   (b.) from yourself
   (c.) from your family

4. What are the skills and knowledge you perceive as essential?

5. What is the condition of school integration in your area ?

6. How is it affecting black teachers and black administrators ?

7. How is it affecting you personally ?

8. Some peple believe that degrees of integration between whites and blacks are essential as knowledge is dispersed from a center of understanding such as the University of New Hampshire through this institute. While mere contacts between diverse groups seeking common knowledge are not a panacea for our social ills, the absence of contacts blocks even the potential for understanding. I am interested in the experiences of social inter-action you have had with southern and northern whites and southern and northern blacks in various regions and under varying circumstances.

9. Are you making decisions in your agency ?
   A. What are they?
   B. How are they accepted ?

10. Do you feel that the summer Institute was helpful to you?
    (a.) How?

11. How does your supervisor feel about your attending the Institute ?

12. Has there been a change in your job function or role as a result of your participation in the Institute ?

13. Would you like to attend the Institute again for six weeks ?
    (a.) More or Less ?

14. Would you return if you recieved a degree (i.e.) Masters or Doctorate in Educational Research ?

15. Have you written any proposals or directed any projects other than the required prposals ?
    (a.) Federal
    (b.) State
    (c.) Local

16. How useful has the Institute information been in your job ?

17. Has your supervisor invited you to share your experiences with others ?

PART II

1. How long did it take you to write your proposal ?

2. Has your proposal been:
   (a) implemented
   (b) Financed
   (c) accepted in your area

3. Did you have difficulty getting the program funded ?

4. How are your superiors accepting the idea of your proposal?

5. What do you feel are the successful factors of your proposal ?

6. With what aspects of your proposal are you experiencing most difficulty ?

7. Which instruction area was most helpful to you in the development of your proposal ?

8. Have you recieved any assistance from:
   (a) Institute staff
   (b) participants
   (c) Consultants
   (d) Other.

9. What is your basic need in the fulfillment of your project ?

10. The Observation of the project/Or any consultative assistance that the participant may have.

INTERVIEW SCHEDULE

Supervisor

1. What type of employer is (Name of participant)_____?

2. What is your evaluation of _____?

3. Were you aware of His/her attending the HEW Institute ?

4. Do you feel that the HEW Institute was helpful or harmful ?

5. Do you utilize _____ in the decision making process ? How long ?

6. Is he/ her an asset to your program ?

7. How do you best use his/her skills in this agency ?

8. Do you feel that he/she will earn a promotion in the near future ? What ? Why?

9. When was his/her last promotion ? What ?

10. Give any additional information about _____.

APPENDIX C

EVALUATION OF THE INSTRUCTIONAL EFFECTIVENESS OF THE 1967 to 1970 SUMMER RESEARCH TRAINING INSTITUTES CONDUCTED AT THE UNIVERSITY OF NEW HAMPSHIRE

STATEMENT OF OBJECTIVES

1967 - 1970

Objectives - USOE Institutes 1967-70

For the Institutes that occurred in 1967 and 1968 the objectives were listed more or less generally and not sub-divided into specific objectives.

The proposed objectives for the 1967 Institute were:

The development of a piece of personal research which has relevancy in the person's home school district or home state;

The studies of methods of educational research with attention to statistical analyses by which the hypotheses are either accepted or rejected;

The use of modern data processing equipment to facilitate the encoding and capturing of this research data;

The identification of present research literature applicable to the research problems of the trainees home districts.

The proposed objectives for 1968 were:

The study of the problem inherent in evaluating the particular educational problem with which the trainee is concerned;

The study of major alternatives open to the educator in terms of educational research methodologies; for instance, the experimental approach as typified by the work of Campbell and Stanley; or the context, input, process and product model (CIPP) as presented by Stufflebeam. In either model approach, the program evaluation and review technique (PERT) presently being developed for education by Cook, will be advocated as the method of organizing;

The study of communication techniques applicable to the proper implementation of the decision-making process at various levels of the educational system;

The use of modern data processing equipment to facilitate the encoding and utilization of research data;

The reading of current literature with emphasis on the application of literature relevant to the research project with which the trainee is involved.

Beginning in 1969 a general proposed objective was used followed by more specific objectives as can be seen from the following list:

The study of the problems inherent in evaluating the particular curriculum changes with which the trainee is concerned. The study of the problem of evaluation was approached by having the trainees identify, write, and evaluate objectives for instructional programs in the areas of curriculum change in which they were interested.

SPECIFIC OBJECTIVES:

At the end of the program the participants demonstrated their ability by performing the following tasks:

a. Identify evaluative techniques which can be utilized to provide information for making decisions about curriculum change;

b. Identify the objectives for a specific program in their area of interest;

c. Distinguish between well-written and poorly-written objectives;

d. Identify and construct performance objectives;

e. To translate (when possible) into performance objectives the objectives stated in the curriculum guides presently used in their school system which are stated in non-verbal terms.

The study of the major alternatives open to the educator in terms of educational research methodologies. For instance the experimental approach as typified by the work of Campbell and Stanley, or the context, input, process and product (CIPP) model as presented by Stufflebeam. In either approach the program evaluation and review technique (PERT), developed for education by Cook, will be advocated as the method of organizing the project.

SPECIFIC OBJECTIVES:

At the end of the program the participants demonstrated their ability to perform the following tasks:

a. Identify the classification scheme of the CIPP evaluation model;

b. Construct a research study using either context evaluation, input evaluation, process evaluation, or product evaluation;

c. Describe the differences between an experimental and quasi-experimental design for educational research;

d. Order, with the PERT technique, the planning of an educational research study.

The study of communication techniques applicable to proper implementation of the decision-making process at various levels of the educational system.

SPECIFIC OBJECTIVES:

At the end of the program the participants demonstrated their ability to perform the following tasks:

a. Interpret the research findings of several journal articles;

b. Demonstrate the competency to apply the findings of a research study to ones local school situation;

c. Describe the problems associated with dissemination and adoption of the general kind of educational research findings to a local school system.

The use of modern data processing equipment to facilitate the encoding and utilization of research data.

SPECIFIC OBJECTIVES:

At the end of the program the participants demonstrated their ability to perform the following tasks:

a. Construct a sample computer program;

b. Identify the problems associated with designing an optically scanable document;

c. Demonstrate the ability to operate a remote terminal;

d. Name and describe the use of a variety of modern data processing equipment and its utilization in educational research.

The reading of current educational literature relevant to the research project with which the trainee is involved.

SPECIFIC OBJECTIVES:

At the end of the program the participants demonstrated their ability to perform the following tasks:

a. To identify the major reference source for educational research literature;

b. Construct a bibliography in the area of the trainee's interest;

c. Distinguish the major components of a piece of well written educational research.

The proposed objectives for the 1970 Institute were:

The study of the problems inherent in the management of an educational evaluation project.

SPECIFIC OBJECTIVES:

At the end of the Institute the participants will demonstrate their ability to perform the following tasks:

a. Define systems analysis and the listings of the basic steps related to system analysis procedures;

b. Define the meaning of management information systems (MIS), list the major component parts of an educational information management system, and define the essential steps in the implementation of an MIS in actual practice;

c. Define program, planning, budgeting systems (PPBS) and list the component parts of the PPBS system;

d. Define program evaluation and review technique (PERT), list the basic elements of PERT and prepare a PERT network from a simulated problem situation.

The study of the problems inherent in evaluating the particular curriculum changes with which the trainee is concerned. The study of the problem of evaluation will be attacked by having the trainees identify, write, and evaluate objectives for instructional programs in the area of curriculum change in which they are interested.

SPECIFIC OBJECTIVES:

At the end of the Institute the participants will demonstrate their ability to perform the following tasks:

a. Identify the objectives for a specific program in the area of their personal interest;

b. Discriminate between well-written and poorly-written behavioral stated objectives;

c. Identify and construct a set of performance objectives;

*d. To translate (where possible) into performance, objectives stated in the abstract that they prepared as applicants for the Institute.

The study of major alternatives open to the educator in terms of educational research methodologies. For instance, the experimental approach as typified by Campbell and Stanley, or the context, input, process and product (CIPP) model as presented by Stufflebeam.

SPECIFIC OBJECTIVES:

At the end of the Institute the participants will demonstrate their ability to perform the following tasks:

a. Identify the classification scheme of the CIPP evaluation model;

b. Construct a research study using either context evaluation. input evaluation, process evaluation or product evaluation;

c. Describe the difference between an experimental and a quasi-experimental design for educational research.

The study of the problems associated with the development, dissemination and adoption process in the area of educational evaluation.

SPECIFIC OBJECTIVES:

At the end of the Institute the participants will demonstrate their abilities to perform the following tasks:

---

* Not applicable. Late funding did not provide sufficient time for applicants to prepare and submit research proposal abstract; abstract requirement deleted from trainee recruitment and selection procedure.

a. Identify the problems associated with designing a good research evaluation;

b. Construct a research study which reflects understanding of research design and measurement theory;

c. Distinguish between interpretations which are in fact justified from the data and those which are not justified from the data;

d. Demonstrate through the use of the systems approach the problems associated with developing, disseminating and adopting the results of educational research within an educational environment.

The study of communication techniques applicable to the proper implementation of the decision-making process at various levels of the educational systems.

SPECIFIC OBJECTIVES:

At the end of the Institute the participants will demonstrate their abilities to perform the following tasks:

a. Interpret the research findings of several journal articles;

b. Demonstrate the competency to apply the findings of a research study to one's local school situation;

c. Describe the problems associated with dissemination and adoption of the general kind of educational research findings to a local school system.

The use of modern data processing equipment to facilitate the encoding and utilization of research data.

SPECIFIC OBJECTIVES:

At the end of the Institute the participants will demonstrate their ability to perform the following tasks:

a. Construct a simple computer program;

b. Identify the problems associated with designing an optically scanable document;

c. Demonstrate the ability to operate a remote terminal'

d. Name and describe the use of a variety of modern data processing equipment and its utilization in educational research.

The reading of current educational literature relevant to the research project with which the trainee is involved.

SPECIFIC OBJECTIVES:

At the end of the institute the participants will demonstrate their abilities to perform the following tasks:

a. To identify major reference sources for educational research literature;

b. Construct a bibliography in the area of the trainee's interest;

c. Distinguish the major components of a piece of well-written educational research.

PARTICIPANT FOLLOW-UP EVALUATION QUESTIONNAIRE
H.E.W. SUMMER RESEARCH INSTITUTES 1967-1970
U.S. OFFICE OF EDUCATION
NATIONAL CENTER FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

Prepared by

Bureau of Educational Research and Testing Services
P.O. Box Q
University of New Hampshire
Durham, N.H.

March 4, 1971

1. How many programs/projects proposals did you initiate/write prior to attending your Institute? _____

2. How many programs/project proposals did you initiate/write since attending your Institute? _____

3. Since attending the Institute have you written/initiated any of the following:

   Proposals (Fed., State, Local) titles _____

   _____

   _____

   Evaluations: _____

   _____

   _____

   Research Studies: _____

   _____

   _____

4. My job role and/or function, since attending the Institute has changed from

   _____ to _____.

5. What is the present status of the program/project/proposal you were required to submit as part of your Institute experience?

   _____

   _____

   _____

6. Since your Institute experience have you been in contact with:

   A) Institute Staff YES NO B) Institute Consultants YES NO
   C) Other Participants YES NO

   If yes, please specify the context(s) in which this contact was made

   _____

   _____

   _____

7. Since attending the Institute have you been called on to conduct in-service training programs, workshops or simply give presentations in areas the Institute concentrated on?

YES NO NOT APPLICABLE (If yes, please specify the number, content & audience of such activities)

_____

_____

_____

8. Have you taken or been involved in courses, seminars, workshops, etc., since your Institute, related to educational research and evaluation?

YES NO

If yes, please specify date, title, place, etc.

_____

_____

_____

9. What have you made of the instructional materials presented to you at your Institute?

_____

_____

10. Please rate the following Instructional areas, as presented in your Institute, ACCORDING TO THEIR IMPORTANCE: (a) while attending the Institute and (b) to your present job position.

			Extremely Important	Important	Minimally Important	Not Important At All	No Opinion Response
A	Developing and writing behavioral objectives	a					
		b					
B	The construction and identification of learning hierarchies	a					
		b					
C	Understanding the various administrative approach to program/project management	a					
		b					

			Extremely Important	Important	Minimally Important	Not Important At All	No Opinion Response
D	The skill acquired in utilizing the Program Evaluation Review Technique (PERT)	a					
		b					
E	The CIPP model of Evaluation (Context, Input, Process, Product)	a					
		b					
F	The skills and practice acquired by writing computer programs	a					
		b					
G	The skills and practice acquired in operating computers and computer supportive hardware	a					
		b					
H	The statistical skills offered as an introductory base or general review of those needed in research	a					
		b					
I	Knowledge gained from interaction with fellow participants	a					
		b					

			Extremely Important	Important	Minimally Important	Not Important At All	No Opinion Response
J	Knowledge gained from interaction with B.E.R.T.S. staff (exclusive of outside consultants)	a					
		b					
K	Knowledge gained from interaction with Institute consultants outside of the classroom	a					
		b					
L	Knowledge of proposal writing skills acquired	a					
M	Importance of readings in required texts as well as outside sources	a					
		b					

11. Do you feel that your job function or role has changed as a result of your participating in the Institute?

/__/ very significantly /__/ significantly /__/ some what

/__/ not at all /__/ don't know

12. Would you commit yourself to a number of such Institutes (6-weeks) to receive an advanced degree such as a Master's in Educational Research and/or Education?

/__/ YES /__/ NO /__/ MAYBE

13. Participants to Institutes of this type should be grouped by experience, job function and expertise on a more

/__/ Homogeneous basis /__/ Heterogeneous /__/ no opinion

14. Do you feel the use of "big name" consultants from large, outstanding universities at these Institutes is

/_/ of extreme value /_/ something that could be handled by other less well known but comparable trained personnel

/_/ of no significant value /_/ no opinion

15. What are some of the changes you would make assuming you were conducting the Institute?

_____

_____

_____

16/ What do you believe the greatest strengths of such Institutes are:

_____

_____

_____

17. What do you believe the greatest weaknesses of such Institutes are:

_____

_____

_____

Additional comment or personal opinion:

_____

_____

_____

Complete any statements on back

PARTICIPANT JOB CHANGES

1967 - 1970

NAME	YEAR	PREVIOUS	PRESENT
Caron, Thomas L.	1967	Principal Pollard School Plaistow, N.H.	SAME
Constantine, Francis X.	1967	Coordinator, Title I Riverside Park Jr. High Springfield, Vermont	SAME
Eno, Carroll J.	1967	Director of Guidance Woodstock Union High School Woodstock, Vermont	SAME
Hammond, Frank M.	1967	Coordinator, Title III Social Studies Teacher Sunapee Central School	Chairman, Social Studies Sunapee Central School
Harkness, Harvey F.	1967	N.H. Director, New England Education Assessment Project N.H. State Department of Ed.	Director of Teacher Ed. N.H. State Department of Education
Jacobs, Edwin Hall	1967	Director of Guidance Otter Valley Union High School Brandon, Vermont	SAME
LeClair, Richard E.	1967	Director of Guidance Sanborn Regional High School Kingston, N.H.	Director of Counseling Northern Essex Community College, Haverhill, MA
Mitchell, Charles J.	1967	Consultant-Vocational Guidance N.H. State Department of Ed.	Director, Counseling N.H. College

NAME	YEAR	PREVIOUS	PRESENT
Porter, G. William	1967	Director of Guidance Georges Valley High School Thomaston, Maine	Consultant, Vocational Guidance, N.H. State Department of Education
Severson, Kenneth	1967	Principal Middlebury Union High School Middlebury, Vermont	SAME
Wallace, Roger A.	1967	Elementary Supervisory Washington West School Dist. Waterbury, Vermont	Principal Adams School Waterbury, Vermont
Williams, Herbert O.	1967	Director of Guidance Newport High School Newport, N.H.	SAME
Wilson, Francis C.	1967	Superintendent Supervisory Union #14	SAME
Youngerman Jr., Stephenson S.	1967	Superintendent Orange-Windsor School District South Royalton, Vermont	Superintendent Boise, Idaho

NAME	YEAR	PREVIOUS	PRESENT
Cardner, Richard A.	1968	Guidance Counselor Supervisory Union #40] Milford, N.H.	School Counselor Neurnberg Amer. High Neurnberg, Germany
Emerson, John Crosby	1968	Principal Bradford Academy	Math teacher Champlain Valley High Hinesburg, Vermont
Flight, Gordon L.	1968	Principal Bethlehem School Bethlehem, N.H.	Elementary consultant Groveton, N.H.
Graham, Geoffrey	1968	Superintendent Rutland Central Supervisory Union Rutland, Vermont	Assoc. Prof. of Ed. Lyndon State College Lyndonville, Vt.
Hall, Stanley L.	1968	Director of Guidance Mascoma Valley Reg. High West Canaan, N.H.	Carpenter
Holt, Hugh	1968	School Counselor Raymond Consolidated	Elementary Counselor Derry Elementary
Kinney, Bruce J.	1968	Superintendent Maine School District #5	SAME
Lark, Bert W.	1968	Assistant Principal Windsor High School Windsor, Vermont	Principal B.U.H.S. Brattleboro, Vermont
Putz, George J.	1968	Anthropology and Social Relations Franconia College	Self-employed

NAME	YEAR	PREVIOUS	PRESENT
Dixon, Ralph E.	1969	Teacher-Social Studies, English Newfound Memorial High School	SAME
Marston, Charles H.	1969	Consultant, N.H. State Department of Education	SAME
MacFarlane Jr., James W.	1969	Head Teacher and Building Principal Jennie D. Blake School	SAME
Darling, George Scott	1969	Guidance Counselor Kingswood Regional High School	Headmaster Coe-Brown Academy
Prevost, Fernand J.	1969	Consultant, N.H. State Department of Education	SAME
Simpson, Velma E.	1969	Guidance Counselor Rundlett Junior High School	SAME
Hackett, Francis D.	1969	Teacher-Industrial Arts, Work-study Concord High School	Department Head Concord High School
Cameron, Philip J.	1969	Director of Guidance Waterville High School, Maine	SAME
Osborne, Douglas L.	1969	Director of Music Merrimack Valley High School	SAME
Feuerstein, Martin	1969	Principal Andover Elementary School	SAME
Barnes Jr., Everett	1969	Principal Jr. High Social Studies Teacher Campton Central School	Admin. Asst. HEW Institute-1970
Emilio, Ann D.	1969	School Counselor Salem High School	SAME
Lewis, George H.	1969	Chairman, Math Department Concord High School	Sr. Consultant Planning & Evaluation N.H. State Department

NAME	YEAR	PREVIOUS	PRESENT
Abbott, Douglas W.	1969	School Counselor Salem High School	SAME
Grodinsky, Harold M.	1969	Statistician Maine State Dept. of Ed.	Director, H.E.F.P. Maine State Dept.
Hokans, Corlyn B.	1969	Teacher Acworth Elementary School	Principal Acworth Elementary
Winslow Jr., Edward F.	1969	Teacher-Math & Physics Fall Mt. Regional	Craftsman-Teacher Fall Mt. Regional
Apt, Frederick S.	1969	Supervising Principal Whipple & Farragut Schools Portsmouth, N.H.	SAME
Harnois, Herman A.	1969	Instructor, Language Arts Swanton Jr.-Sr. High School	Principal Swanton Elem. School
Evans, Norman	1969	Principal Monadnock Regional School District	SAME

NAME	YEAR	PREVIOUS	PRESENT
Andre, Richard Eugene	1970	Doctoral Candidate Graduate Research Assistant School of Education University of Massachusetts	SAME
Brooks, Marshall	1970	Evaluation Analysts State Dept. of Public Instruction Raleigh, N.C.	Educational Consultant SAME
Burke, James M.	1970	Consultant, Measurement & Evaluation School of Education University of Massachusetts	SAME
Finch, John M.	1970	PAERIS Fellowship University of Iowa	SAME
Garrett, James F.	1970	Math Teacher Alton Park Jr. High Chattanooga, Tennessee	Assistant Principal
Hilderbrand, John A.	1970	Teacher, Parkway Jr. High School Miami, Florida	Supervisor of Evaluation
Johnson, Mabel I.	1970	Reading Coordinator Mt. Bayou District Schools Bayou, Mississippi	SAME
Kilbert, Charles J.	1970	Assistant Principal Alfred C. Priestley Jr. High New Orleans, Louisiana	Supervisor, Adult Basic Education
King, Gerald	1970	Graduate Student University of Texas	Director of Planning & Informational Systems
Lehman, Robert Arthur	1970	Staff Associate, Nova University	Evaluation Coordinator Montana State Department

NAME	YEAR	PREVIOUS	PRESENT
Morrison, Max	1970	Chief, Title III Iowa State Dept. of Public Instruction	Director, Planning Research & Evaluation
Moseley, Frederick A.	1970	Principal Smith Elementary Waco, Texas	SAME
Moses, Augustine H.	1970	Acting Assistant Director Trust Territory Department of Ed. Saipan, Mariana Islands	Coordinator, Secondary Education
Myers, Donald E.	1970	Student, Nova University Fort Lauderdale, Florida	SAME
Owens, Sharynn LeRoy	1970	Instructor, History Knoxville College Knoxville, Tennessee	SAME
Pickard, H. Stuart	1970	Evaluation-Div. of Instruction N.H. State Dept. of Education	Evaluation-S.E.D. SAME
Piters, Ronald	1970	University fellow Utah State University	Project Director Office of Superintendent of Public Instruction Helena, Montana
Ricci, Robert	1970	Coordinator, Title III, E.S.E.A. Rhode Island Agency for Elementary and Secondary Education	SAME
Simonini, Louis F.	1970	Consultant, E.E.O. Rhode Island State Department of Ed.	Student University of Miami
Sumida, Janet Itsuyo	1970	Staff Specialist II, Evaluator Hawaii State Dept. of Education	Doctoral Candidate Ohio State University
Turner, Lucious	1970	Teacher, Brmkley High School Jackson, Mississippi	SAME
Williamson, Jr., Charles W.	1970	Assistant Prof. of Sociology Knoxville College	SAME

TABLE B

PARTICIPANT RESPONSES BY PROFESSIONAL ROLE

- Teachers
- School Administrators
- State Department of Education Personnel
- Research/College Personnel

T = Teachers, SA = School Administrators, SD = State Department of Education Personnel, R/C = Research/College Personnel

10 A

		Extremely Important				Important				Minimally Important				Not Important				No Opinion				Total
		T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	
During Institute	1967	1	-	1	-	2	3	1	1	1	1	-	-	-	-	-	-	1	1	-	1	14
	1968	1	-	-	-	3	1	-	2	1	-	-	-	-	-	-	-	-	1	-	-	9
	1969	4	2	1	-	3	5	2	1	-	-	-	-	1	-	1	-	-	1	-	-	21
	1970	2	1	1	2	-	2	7	4	-	-	1	1	-	-	1	-	-	-	-	1	23
	Total	8	3	3	2	8	11	10	8	2	1	1	1	1	-	2	-	1	3	-	2	67
Present Position	1967	1	2	-	-	2	2	2	-	-	-	-	-	1	-	-	-	1	1	-	2	14
	1968	2	1	-	-	2	-	-	1	1	-	-	1	-	-	-	-	-	1	-	-	9
	1969	4	3	2	-	3	3	1	1	1	1	-	-	-	-	1	-	-	1	-	-	21
	1970	2	1	3	1	-	2	6	2	-	-	-	3	-	-	1	1	-	-	-	1	23
	Total	9	7	5	1	7	7	9	4	2	1	-	4	1	-	2	1	1	3	-	3	67

****

10 B

During Institute	1967	-	-	-	-	4	2	2	1	-	2	-	-	-	-	-	-	1	1	-	1	14
	1968	-	1	-	-	2	-	-	2	1	-	-	-	1	-	-	-	1	1	-	-	9
	1969	2	-	1	-	5	4	2	1	1	3	-	-	-	-	1	-	-	1	-	-	21
	1970	-	1	1	1	1	2	6	2	1	-	3	4	-	-	-	1	-	-	-	-	23
	Total	2	2	2	1	12	8	10	6	3	5	3	4	1	-	1	1	2	3	-	1	67
Present Position	1967	1	-	-	-	2	3	2	-	-	1	-	-	1	-	-	-	1	1	-	2	14
	1968	-	1	-	-	2	-	-	-	1	-	-	1	1	-	-	1	1	1	-	-	9
	1969	-	-	-	-	3	2	2	-	5	3	1	1	-	2	1	-	-	1	-	-	21
	1970	-	1	1	1	1	2	3	-	1	-	4	5	-	-	2	1	-	-	-	1	23
	Total	1	2	1	1	8	7	7	-	7	4	5	7	2	2	3	2	2	3	-	3	67

10 C

		Extremely Important				Important				Minimally Important				Not Important				No Opinion				Total
		T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	
During Institute	1967	-	1	-	1	2	3	2	1	2	-	-	-	-	-	-	-	1	1	-	-	14
	1968	1	1	-	-	2	-	-	1	1	-	-	1	-	-	-	-	1	1	-	-	9
	1969	3	2	-	-	5	3	3	1	-	2	1	-	-	-	-	-	-	1	-	-	21
	1970	1	2	2	2	1	1	8	5	-	-	-	1	-	-	-	-	-	-	-	-	23
	Total	5	6	2	3	10	7	13	8	3	2	1	2	-	-	-	-	2	3	-	-	67
Present Position	1967	-	3	1	-	1	1	1	1	2	-	-	-	1	-	-	-	1	1	-	1	14
	1968	1	-	-	-	1	1	-	-	1	-	-	1	1	-	-	1	1	1	-	-	9
	1969	2	1	1	-	5	3	3	-	1	2	-	1	-	1	-	-	-	1	-	-	21
	1970	1	2	5	2	1	1	5	3	-	-	-	3	-	-	-	-	-	-	-	-	23
	Total	4	6	7	2	8	6	9	4	4	2	-	5	2	1	-	1	2	3	-	1	67

****

10 D

During Institute	1967	-	-	-	1	4	3	-	-	-	-	1	-	-	-	-	-	1	2	1	1	14
	1968	2	-	-	1	1	1	-	1	2	-	-	-	-	-	-	-	-	1	-	-	9
	1969	2	-	1	-	3	4	3	-	2	2	-	1	1	-	-	-	-	2	-	-	21
	1970	1	2	2	2	1	1	4	4	-	-	3	2	-	-	1	-	-	-	-	-	23
	Total	5	2	3	4	9	9	7	5	4	2	4	3	1	-	1	-	1	5	1	1	67
Present Position	1967	1	-	-	-	-	2	1	-	2	1	-	-	1	-	-	-	1	2	1	2	14
	1968	2	-	-	-	2	-	-	-	1	1	-	2	-	-	-	-	-	1	-	-	9
	1969	1	1	2	-	3	-	-	-	2	3	2	1	2	2	-	-	-	2	-	-	21
	1970	-	1	1	3	1	2	6	2	1	-	3	3	-	-	-	-	-	-	-	-	23
	Total	4	2	3	3	6	4	7	2	6	5	5	6	3	2	-	-	1	5	1	2	67

10 E

		Extremely Important				Important				Minimally Important				Not Important				No Opinion				Total
		T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	
During Institute	1967	-	-	-	-	2	2	-	-	2	-	1	-	-	-	-	-	1	3	1	2	14
	1968	1	-	-	-	2	1	-	2	2	-	-	-	-	-	-	-	-	1	-	-	9
	1969	-	-	1	1	5	4	3	-	3	2	-	-	-	-	-	-	-	2	-	-	21
	1970	1	1	2	5	1	2	7	3	-	-	-	-	-	-	1	-	-	-	-	-	23
	Total	2	1	3	6	10	9	10	5	7	2	1	-	-	-	1	-	1	6	1	2	67
Present Position	1967	-	-	-	-	1	1	-	1	2	2	1	-	1	-	-	-	-	2	1	2	14
	1968	2	-	-	-	-	-	-	1	2	1	-	-	1	-	-	1	-	1	-	-	9
	1969	1	1	2	1	3	3	1	-	1	1	1	-	2	1	-	-	1	2	-	-	21
	1970	1	1	6	4	1	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	23
	Total	4	2	8	5	5	6	5	6	5	4	2	-	4	1	-	1	1	5	1	2	67

****

10 F

During Institute	1967	-	1	-	1	3	3	-	-	1	1	1	1	1	-	1	-	-	-	-	-	14
	1968	2	1	-	1	1	-	-	-	-	1	-	1	2	-	-	-	-	-	-	-	9
	1969	1	1	-	-	2	4	3	1	4	2	-	-	-	-	-	-	1	1	1	-	21
	1970	-	1	-	-	1	1	-	2	-	-	2	-	-	1	1	2	1	-	7	4	23
	Total	3	4	-	2	7	8	3	3	5	4	3	2	3	1	2	2	2	1	8	4	67
Present Position	1967	-	-	1	-	1	2	-	-	1	2	-	1	3	1	1	-	-	-	-	1	14
	1968	-	2	-	-	3	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	9
	1969	-	1	-	-	3	1	3	1	4	2	-	-	1	3	-	-	-	1	1	-	21
	1970	-	1	-	2	1	-	-	1	-	1	3	2	-	1	-	-	1	-	7	3	23
	Total	-	4	1	2	8	3	3	2	5	5	3	5	6	5	1	-	1	1	8	4	67

10 G

		Extremely Important				Important				Minimally Important				Not Important				No Opinion				Total
		T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	
During Institute	1967	-	1	-	-	2	2	-	2	2	2	2	-	1	-	-	-	-	-	-	-	14
	1968	2	1	-	1	1	-	-	-	1	-	-	1	1	1	-	-	-	-	-	-	9
	1969	-	-	-	-	2	3	1	1	6	4	1	-	-	-	1	-	-	1	1	-	21
	1970	1	-	-	-	-	1	-	-	-	1	2	2	-	-	1	2	1	1	7	4	23
	Total	3	2	-	1	5	6	1	3	9	7	5	3	2	1	2	2	1	2	8	4	67
Present Position	1967	-	-	-	-	1	1	1	-	1	3	1	-	3	1	-	2	-	-	-	-	14
	1968	-	1	-	-	4	-	-	-	-	1	-	2	1	-	-	-	-	-	-	-	9
	1969	-	-	-	-	2	1	2	1	3	3	-	-	2	3	1	-	1	1	1	-	21
	1970	1	-	-	1	-	1	-	-	-	1	3	1	-	-	-	3	1	1	7	3	23
	Total	1	1	-	1	7	3	3	1	4	8	4	3	6	4	1	5	2	2	8	3	67

****

10 H

During Institute	1967	3	2	-	-	2	3	2	1	-	-	-	1	-	-	-	-	-	-	-	-	14
	1968	2	1	-	1	3	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	9
	1969	1	-	-	-	3	5	2	1	2	2	-	-	2	-	1	-	-	1	1	-	21
	1970	-	1	-	-	1	2	3	1	-	-	1	1	-	-	1	3	1	-	5	3	23
	Total	6	4	-	1	9	10	7	3	2	3	1	3	2	-	2	3	1	1	6	3	67
Present Position	1967	2	1	-	-	2	4	2	1	-	-	-	-	1	-	-	-	-	-	-	1	14
	1968	3	1	-	-	2	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	9
	1969	1	-	2	-	3	5	1	1	4	1	-	-	-	1	-	-	-	1	1	-	21
	1970	-	1	-	3	1	2	4	-	-	-	1	1	-	-	-	1	1	-	5	3	23
	Total	6	3	2	3	8	11	7	2	4	2	1	3	1	1	-	1	1	1	6	4	67

10 I

		Extremely Important				Important				Minimally Important				Not Important				No Opinion				Total
		T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	
During Institute	1967	2	3	1	-	2	2	1	2	1	-	-	-	-	-	-	-	-	-	-	-	14
	1968	-	2	-	-	4	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-	9
	1969	5	5	2	1	2	2	2	-	1	-	-	-	-	-	-	-	-	1	-	-	21
	1970	1	2	1	6	1	1	5	1	-	-	4	1	-	-	-	-	-	-	-	-	23
	Total	8	12	4	7	9	5	8	4	3	-	4	2	-	-	-	-	-	1	-	-	67
Present Position	1967	1	3	-	-	3	2	2	1	1	-	-	-	-	-	-	-	-	-	-	1	14
	1968	-	2	-	-	2	-	-	-	2	-	-	1	1	-	-	1	-	-	-	-	9
	1969	6	4	2	1	2	2	2	-	-	1	-	-	-	-	-	-	-	1	-	-	21
	1970	2	2	1	5	-	1	4	3	-	-	5	-	-	-	-	-	-	-	-	-	23
	Total	9	11	3	6	7	5	8	4	3	1	5	1	1	-	-	1	-	1	-	1	67

****

10 J

During Institute	1967	2	1	1	-	2	4	1	2	1	-	-	-	-	-	-	-	-	-	-	-	14
	1968	3	1	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-	1	-	-	9
	1969	4	3	2	-	4	4	2	1	-	-	-	-	-	-	-	-	-	1	-	-	21
	1970	1	2	2	3	1	1	3	-	-	-	3	3	-	-	2	2	-	-	-	-	23
	Total	10	7	5	3	9	9	6	5	1	-	3	3	-	-	2	2	-	2	-	-	67
Present Position	1967	2	-	-	-	2	4	2	1	-	-	-	-	1	-	-	-	-	1	-	1	14
	1968	2	1	-	-	2	-	-	-	1	1	-	2	-	-	-	-	-	-	-	-	9
	1969	3	3	-	1	3	2	2	-	2	1	-	-	-	1	2	-	-	1	-	-	21
	1970	1	2	2	3	1	1	2	-	-	-	4	2	-	-	2	3	-	-	-	-	23
	Total	8	6	2	4	8	7	6	1	3	2	4	4	1	1	4	3	-	2	-	1	67

10 K

		Extremely Important				Important				Minimally Important				Not Important				No Opinion				Total
		T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	
During Institute	1967	-	-	-	1	2	3	1	1	2	1	-	-	1	-	1	-	-	1	-	-	14
	1968	-	-	-	-	2	1	-	1	2	-	-	1	1	-	-	-	-	1	-	-	9
	1969	1	-	1	1	7	5	2	-	-	1	-	-	-	1	1	-	-	1	-	-	21
	1970	-	1	3	2	1	2	4	5	-	-	3	1	-	-	-	-	1	-	-	-	23
	Total	1	1	4	4	12	11	7	7	4	2	3	2	2	1	2	-	1	3	-	-	67
Present Position	1967	-	-	-	-	1	3	-	1	1	1	1	-	3	-	1	-	-	1	-	1	14
	1968	-	1	-	-	-	-	-	-	2	1	-	1	3	-	-	-	-	-	-	1	9
	1969	-	-	1	1	6	3	2	-	1	2	-	-	1	2	1	-	-	1	-	-	21
	1970	-	1	4	3	1	2	2	4	-	-	4	1	-	-	-	-	1	-	-	-	23
	Total	-	2	5	4	8	8	4	5	4	4	5	2	7	2	2	-	1	2	-	2	67

****

10 L

During Institute	1967	2	1	-	-	3	4	2	2	-	-	-	-	-	-	-	-	-	-	-	-	14
	1968	2	2	-	1	2	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	9
	1969	3	1	2	1	4	4	1	-	-	1	1	-	1	-	1	-	-	1	-	-	21
	1970	2	2	1	4	-	1	8	1	-	-	-	3	-	-	1	-	-	-	-	-	23
	Total	9	6	3	6	9	9	11	3	-	1	1	4	2	-	2	-	-	1	-	-	67
Present Position	1967	1	1	-	-	1	4	1	-	2	-	1	1	1	-	-	-	-	-	-	1	14
	1968	1	1	-	-	4	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	9
	1969	4	3	1	1	2	3	3	-	1	1	-	-	1	-	-	-	-	1	-	-	21
	1970	2	2	2	6	-	1	6	1	-	-	1	1	-	-	1	-	-	-	-	-	23
	Total	8	7	3	7	7	8	10	1	3	2	2	4	2	-	1	-	-	1	-	1	67

10 M

		Extremely Important				Important				Minimally Important				Not Important				No Opinion				
		T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	T	SA	SD	R/C	
During Institute	1967	1	2	-	-	1	3	2	1	3	-	-	1	-	-	-	-	-	-	-	-	14
	1968	1	-	-	-	3	-	-	2	1	2	-	-	-	-	-	-	-	-	-	-	9
	1969	2	4	1	-	3	2	3	1	2	1	-	-	1	-	-	-	-	1	-	-	21
	1970	2	1	-	1	-	2	6	3	-	-	4	3	-	-	-	1	-	-	-	-	23
	Total	6	7	1	1	7	7	11	7	6	3	4	4	1	-	-	1	-	1	-	-	67
Present Position	1967	1	1	-	-	2	3	2	-	2	1	-	1	-	-	-	-	-	-	-	1	14
	1968	-	-	-	-	4	-	-	1	1	2	-	1	-	-	-	-	-	-	-	-	9
	1969	1	4	2	-	3	2	1	1	3	1	1	-	1	-	-	-	-	1	-	-	21
	1970	1	1	-	1	1	2	6	3	-	-	4	2	-	-	-	2	-	-	-	-	23
	Total	3	6	2	1	10	7	9	5	6	4	5	4	1	-	-	2	-	1	-	1	67

ARE SUMMER INSTITUTES A VIABLE INSTRUCTIONAL STRATEGY?

In this section, we depart somewhat from the statistical treatment of our data in order to present in capsule form, our response to the question: Are Summer Research Training Institutes, as typified by those conducted at the University of New Hampshire, a viable instructional strategy?

The participants point of view generally seems to suggest that summer institute programs have been reasonably effective. We would also agree. But we must hastily add that agreement does not necessarily constitute total acceptance of the designs of past institutes. Based on our experiences over the last four years, some suggested modifications are worth noting.

First of all, it is imperative that the individual who designs any such institute actually directs it. Not only must he oversee the actual operation of the institute, he must also invest considerable time and effort in the months prior to the start of the institute. As CIRCE points out in their Final Report, *"to do an effective job of running an institute, the director must be free from the entanglements and responsibilities of his regular day-to-day duties. As long as the director remains physically proximate to his 'home institution' he will find it very difficult to avoid those entanglements. Sudden emergencies, unexpected complications occur too frequently—particularly in a university setting--for us to be able to assume that a 'paper commitment' to an institute will in fact hold up on an assumed 100% basis. The task of the administrative staff of such an institute is enormous...Logistics, timely funding, communication, facilitation, interpersonal skills, administrative know how are all essential."* Institutes organized around the concept of utilizing consultants for weekly

instructional segments, compound the need for coordination, transition from week to week and organization to an almost impossible degree. *"The demands such an approaches places on staff, consultants, and participants are hard to meet (CIRCE)."* It seems unlikely therefore, that an institute director can be effective as long as his responsibilities divert him from the actual directing of the institute program.

With respect to the selection of participants, the notion that a summer institute can serve the needs and desires of a cross-section of professional educators is perhaps somewhat unrealistic. The participant response data described in the report on the heterogeneity or homogeneity of participant grouping is rather inconclusive. However, *"an alternative to be considered is a series of narrowly formed, short or long-term institutes or workshops, each serving a homogeneous group of participants--homogeneous with respect to job responsibilities, educational backgrounds, perhaps even regional locations." (CIRCE)*

Related to the area of selection is the issue of recruiting [illegible] ethnic-minority groups. The use of minimum participant quotas and pre-institute orientation for ethnic-minority groups, as required by the 1970 Institute is viewed as being unnecessary and in many instances perceived by these groups as mere "tokenism". We do feel however, that institutes of the type and quality at U.N.H. in the summer of 1970 offer a great deal to these groups, and participants representing various minority groups ought to be actively recruited.for future institutes.

With specific regard to the pre-institute orientation for the 1970 Institute, one black participant summed it up very well, *"we have had to adjust to our environment and changes in our situations all our lives; we adjust easier than anyone else, we have had more practice--so why select only us to attend the pre-session?"*

If other summer institutes are organized around the concept of bringing in "expert" consultants for relatively short periods of time for selected instructional areas, an elaborate and detailed external and internal "monitoring system" should be required. Such a system is expensive, however, it is vitally necessary, especially if heterogeneous participant groups are to be involved.

From our point of view, one of the most interesting dimensions of the four summer institutes has been lack of a clear definition distinguishing whether the training programs have been geared predominantly to train educational evaluators or educational researcher's. For some people, this issue could be perceived as trite and discounted as a problem in semantics. For us, the distinction is significant and worth noting. Looking back over the four years at the instructional content of each institute program, instructional areas seem to be reflecting a synomous interpretation of research and evaluation. (i.e., Campbell and Stanley, Quasi-Experimental Design, Statistics and Computer Programming vs. CIPP, Adoption, and Diffusion of Innovation, Program/Project Management) the distinction here, should not be construed as evaluating the relative value of research as opposed to evaluation. Our purpose is to simply suggest that within the design framework of summer institutes, consideration should be given to who are we training and why.

Today, there is a growing emphasis on what the public dollar is purchasing in terms of educational services, products and quality. In short, accountability. There can be little debate that evaluation is a critical element in any attempt at accountability. The evaluator, armed with the tools of his profession and skills acquired through training, can contribute significantly to the improvement of the quality of education a school system offers as well as to the cost efficiency. With money becoming scarce in many school districts the need does not appear to be one of training additional personnel to add to an educational bureaucracy but to train evaluators from selected personnel already in the system --- professionals capable of evaluating the effectiveness of their own (or other) programs within the system.

This is not to say that there is not a need for educational researchers. Educational researchers have, in the past and undoubtedly will continue, to contribute significantly to educational change.

Ideally then, we should be offering institutes to train each of these groups of professionals. However, if, as so often is the case, we are constricted by time or fiscal limitations into making an either/or decision, we will be forced to examine very closely the priority list of educational needs and select the group most capable of fulfilling those needs.

SUGGESTED MODIFIED INSTITUTE MODEL

TIME

This model would consist of two distinct four week instructional segments each summer. Each segment would focus on one specific area, such as program management, or evaluation models, etc., in the case of evaluation; or, for research they could be experimental design or statistical analysis. Each segment would have appropriate secondary supportive instructional areas offered on alternate days (statistics, computer, change process, educational grantsmanship, etc). Each instructional segment would offer six credit hours, so by going to both 4 week segments in the summer a participant would earn twelve credit hours. The entire program would consist of three consecutive summers or a total of thirty-six credits and the awarding of a Master's Degree in Educational Research or Educational Evaluation..

A participant not interested in the total program or the degree could enter at any level and remain as long as he chose. Participants with a proven expertise in one secondary supportive instructional segment (such as PERT) would be given credit for that expertise and would not have to attend that particular segment.

A four day instructional week might prove beneficial by allowing people who normally might not be able to attend due to time constraints to do so. For example, superintendents, state department personnel, etc., could attend the institute four days and have the fifth day to return to their offices to provide continuity and direction.

BI-LEVEL

This model could approach the areas of instruction as well as participant selection on a bi-level basis. That is to say, research and evaluation could be dealt with as two distinct entities with specific instructional offerings for each, but still employing the same institute time frame.

A possible solution to the past problems of heterogeneous and homogeneous groupings might be using the "star" consultants with those participants having the greatest expertise in an area and less well known but comparably trained staff for participants seeking a survey of the knowledge in that area. The consultant would be operating on an instructional level maximizing his potential and yet would be available to the survey group on occassion to provide them with the credibility they seek.

FOLLOW-UP

During the academic year following the summer institute a number of short, high-intensity workshops could be held to assist participants in transferring classroom experiences into the real life situations confronting the professional educator. These workshops or seminars would be valuable also in providing feedback for curricula modifications for subsequent institutes, the development of instructional packages for broader in-service training and, hopefully guarantee a utilization, by the participant, of the concepts he has learned in the institute once he returned to his position.